

Lake Erie Region Source Protection Committee
Agenda

Thursday, December 2, 2021

1:00 pm

GRCA Zoom Virtual Meeting

Link to be distributed via email prior to meeting

Pages

1. Call to Order

Virtual meeting: by using the microphone and web camera, committee members agree to the recording and livestreaming of the meeting.

2. Roll Call and Certification of Quorum – 17 Members Constitute a Quorum (2/3 of Members plus Chair)

3. Chair's Remarks

4. Review of Agenda

THAT the agenda of December 2, 2021 be approved as distributed.

5. Declarations of Pecuniary Interest

6. Minutes of the Previous Meeting

THAT the minutes of the previous meeting on September 9, 2021 be approved as circulated.

7. Hearing of Delegations

8. Presentations

9. Correspondence

10. Reports

- a. SPC-21-12-01 Source Protection Program Update 1
THAT the Lake Erie Region Source Protection Committee receives report SPC-21-12-01 – Program Update – for information.

- b. SPC-21-12-02 Assessment of Percentage of Managed Lands and Livestock Density within the Paris North and Paris (Bethel) County of Brant Wellhead Protection Areas 7
THAT the Lake Erie Region Source Protection Committee receives report SPC-21-12-02 - Assessment of Percentage of Managed Lands and Livestock Density within the Paris North and Paris (Bethel) County of Brant Wellhead Protection Areas – for information.

- c. SPC-21-12-03 Assessment of Water Quality for Parameters of Concern at County of Brant Municipal Supply Wells 15
THAT the Lake Erie Region Source Protection Committee receives report SPC-21-12-03 - Assessment of Water Quality for Parameters of Concern at County of Brant Municipal Supply Wells – for information;
AND THAT the Lake Erie Region Source Protection Committee support the Lake Erie Region staff recommendation to maintain nitrate Issues for the St. George and Paris North (Gilbert and Telfer) wellfields along with further investigation of the source of nitrate for these wellfields;
AND THAT the Lake Erie Region Source Protection Committee support the Lake Erie Region staff recommendation to add sodium as an Issue under Technical Rule 114 for the Paris (Bethel) wellfield;
AND THAT the Lake Erie Region Source Protection Committee direct Lake Erie Region staff to work with County of Brant staff to delineate an Issue Contributing Area for sodium at the Bethel wellfield and to develop policies pertaining to the sodium Issue.

- d. SPC-21-12-04 Guelph-Guelph/Eramosa Water Quantity Policy Development Progress Update 23
THAT the Lake Erie Region Source Protection Committee receives report SPC-21-12-04 – Guelph-Guelph/Eramosa Water Quantity Policy Development Progress Update – for information.

THAT the Lake Erie Region Source Protection Committee receives report SPC-21-12-05 – Liquid Hydrocarbon Pipeline Threats Policy Update – for information;

AND THAT the Lake Erie Region Source Protection Committee direct Lake Erie Region staff to share the proposed draft hydrocarbon pipeline policies with municipalities not directly affected by liquid hydrocarbon pipelines, for their support and inclusion in future s.34 or s.36 source protection plan updates.

11. Business Arising from Previous Meetings

- a. Lake Erie Region Source Protection Committee request under Technical Rule 119, from February 3, 2011, Re: rehabilitation activities at an aggregate operation within a vulnerable area of a municipal drinking water system that allows ponding of water.

12. Other Business

13. Closed Meeting

14. Next SPC Meeting

March 31, 2022, 1:00pm, virtual meeting

15. Adjourn

THAT the Lake Erie Source Protection Committee meeting of December 2, 2021 be adjourned.

Lake Erie Region Source Protection Committee

Report number: SPC-21-12-01

Date: December 2, 2021

To: Lake Erie Region Source Protection Committee

Subject: Source Protection Program Update

Recommendation:

THAT the Lake Erie Region Source Protection Committee receives report SPC-21-12-01 – Program Update – for information.

Report:

Conservation Authorities Act Regulations

On October 7, 2021, the Ministry of Environment, Conservation and Parks has posted a [decision notice on the Environmental Registry \(ERO\)](#) and filed [three new regulations](#) under the Conservation Authority Act (CAA).

For the Source Protection Program, the changes from the original regulatory proposals (Phase 1) under the CAA to the final regulations are minor in nature. Three changes are worth noting compared to the draft proposal:

- 1) The original regulatory proposal included responsibilities by Source Protection Authorities (SPA) to respond to requests to review proposals in wellhead protection areas (WHPA) and intake protection zones (IPZ) to identify the source protection policies that apply and note potential effect(s) of the project on source water where required. The final regulation includes wording “where the authority considers it advisable” to account for situations where a municipality, rather than a source protection authority may review and comment on development proposals (O. Reg. 686/21 s.13 (3) 4.).
- 2) Details about source protection authorities completing technical work, e.g., land use mapping such as managed lands, impervious surface areas included in the regulatory proposal have been removed from the final regulations.
- 3) Details about source protection authorities clarifying Clean Water Act (CWA), regulations, and source protection plan requirements and implementation responsibilities to municipalities, landowners or other persons impacted by source protection policies included in the regulatory proposal have been removed from the final regulations.

Overall, the largest change in the regulation is with respect to the transition period for conservation authorities to come into conformity with the new framework. Conservation authorities now have an additional 12 months to come into conformity with the new regulation. That is, mandatory programs and services need to be in place by January 1, 2024.

There are no changes expected to how the Source Protection Program is being administered and implemented as part of this transition. The program is identified as a category 1 mandatory program under the CAA and the Ministry of the Environment, Conservation and Parks (MECP) continues its consistent messaging that provincial funding for the Drinking Water Source Protection Program will continue.

Provincial 2020 annual progress reporting summary

The MECP released a [2020 annual progress reporting summary](#). The summary highlights key reporting items from the 2020 annual progress reports: policy implementation and threats addressed, Part IV implementation, provincial ministry implementation, and municipal and source protection authority (SPA) implementation.

Lake Erie Region staff recently released the 2021 Electronic Annual Reporting (EAR) portal for municipal use. The portal contains annual reporting questions, (called reportables) that require municipal responses. Municipalities must complete their annual reporting by February 1, 2022, in accordance with O. Reg. 287/07. Lake Erie Region staff will present annual progress reports for each of the four source protection areas at the March 31, 2022 SPC meeting.

Update on Phase II changes to the Director's Technical Rules and guidance for non-municipal drinking water systems not automatically addressed under the Clean Water Act, 2006 (CWA)

Ministry staff are still awaiting approval from senior management for releasing the final changes to the Director's Technical Rules and the best practices guide on how to protect non-municipal drinking water systems outside of the CWA.

Lake Erie Region staff continue to engage municipalities to assess how the proposed technical rule changes could affect them and the work that may need to be done. Municipal discussions have primarily focussed on impervious surface area re-calculations, hydrocarbon pipeline policy revisions, and climate change assessments.

Financial update

Lake Erie Region staff submitted the 2021-2022 interim financial report to the MECP on October 27, 2021. The MECP has not yet released the Drinking Water Source Protection 2022-2023 Grant Funding Application and Program Application Guide; however, it is expected to be released very soon. Lake Erie Region staff expect that the first draft of the 2022-2023 Grant Funding Application will be due for submission to the MECP before the end of the year.

AODA Compliance: Updating the Lake Erie Region website and Source Protection Documents

The Accessibility for Ontarians with Disabilities Act (AODA) requires that source protection content available to the public, e.g., Lake Erie Source Protection Region website and any documents, maps etc., posted on that website, be AODA compliant. Lake Erie Region staff have made adjustments to templates for

Lake Erie Region Source Protection Committee (SPC) agendas, reports and minutes, as well as templates for memos, letterheads and source protection authority reports. Additional work to make these documents fully AODA compliant is still needed.

Staff are working to make the Catfish Creek and Kettle Creek assessment reports and source protection plans AODA compliant; however, the Grand River and Long Point Region assessment reports and plans will need extra support to achieve AODA compliance given the size and magnitude of the documents.

Concurrently, Lake Erie Region staff, with support by technical staff from Long Point Conservation Authority (LPRCA), are reviewing and updating webpages on Lake Erie Source Protection's website to ensure they are also AODA compliant.

The Grand River Conservation Authority (GRCA) has set a deadline of December 31, 2021 for websites and publicly posted documents to be AODA compliant. Staff aim for the source protection website to be compliant, but due to the complexity and size of some of the documents (mainly assessment reports and source protection plans), not all source protection documents will be able to be compliant by year-end.

Source Protection Plan updates

The s.34 Grand River Assessment Report and Source Protection Plan update for the Town of Grand Valley was submitted to the MECP for review and approval on October 12, 2021.

Updates in the Town of Shelburne (revised WHPAs as a result of pumping rate increases for production wells #7 and #8) and the addition of a backup well (Rocco Well) for the Membro Well in the City of Guelph's Waterworks Drinking Water System will be combined into a future s.34 Grand River Assessment Report and Source Protection Plan update. Proposed updates are planned to be brought to the March 31, 2022 SPC meeting in anticipation of pre-consultation following the meeting and public consultation in early summer 2022.

The timeline for a future Grand River Assessment Report and Source Protection Plan update incorporating the Guelph-Guelph/Eramosa (GGET) Tier 3 Water Budget study and new water quantity policies for Wellington County, City of Guelph, Region of Waterloo and Halton Region is still to be determined. Progress on the development of water quantity policies is presented in report SPC-21-12-04.

Draft technical work is ongoing to incorporate changes to the County of Brant section of the Grand River Assessment Report. The work includes updating managed lands and livestock density calculations for the County's supply wells (see report SPC-12-02 for details), assessing drinking water quality issues for the St. George, Paris North and Bethel municipal supply wells (see report SPC-12-03 for details), and re-calculating impervious surface areas. Work to re-calculate impervious surface areas depends on the timing of the finalization and release of the Director's Technical Rules. The County of Brant technical work is expected to be paired with draft hydrocarbon pipeline policy updates and brought forward to the SPC as a future s.34 update.

Source protection technical work has been initiated for the new Bloomsburg system (two groundwater wells) north-east of the Town of Simcoe. The work will be incorporated into a s.34 Long Point Region Assessment Report and Source Protection Plan update. The timeline for completion of the draft technical work is not yet known. Lake Erie Region staff will update the SPC as work progresses.

Work to update the Catfish Creek and Kettle Creek assessment reports and source protection plans under s.36 of the CWA is nearing completion. The timeline for completion of these updates is dependent upon the finalization and release of the proposed Phase II changes to the Director's Technical Rules and has not yet been determined.

Table 1 provides an overview of the next few SPC meetings and anticipated agenda items for upcoming assessment report and source protection plan updates.

Prepared by:

Ilona Feldmann
Lake Erie Source Protection Program Assistant

Approved by:

Martin Keller
Lake Erie Source Protection Program Manager

Table 1: SPC meeting outlook

SPC Meeting and consultation dates	s.34 “Melancthon/Guelph” Grand River update	s.34 “Guelph-Guelph/Eramosa” Grand River update
December 2, 2021	N/A	• Draft source protection plan consensus policies
March 31, 2022	• technical work and draft updated AR and SPP • release for pre-consultation	TBD
April 4 – May 3, 2022	Pre-consultation period	N/A
June 17, 2022	• draft updated AR and SPP: receive pre-consultation comments • release for public consultation	TBD

Lake Erie Region Source Protection Committee

Report number: SPC-21-12-02

Date: December 2, 2021

To: Members of the Lake Erie Source Protection Committee

Subject: Assessment of Percentage of Managed Lands and Livestock Density within the Paris North and Paris (Bethel) County of Brant Wellhead Protection Areas

Recommendation:

THAT the Lake Erie Region Source Protection Committee receives report SPC-21-12-02 - Assessment of Percentage of Managed Lands and Livestock Density within the Paris North and Paris (Bethel) County of Brant Wellhead Protection Areas – for information.

Summary:

Land use changes in the County of Brant, specifically Paris North and Bethel wellhead protection areas (WHPAs), have prompted a re-assessment of the calculations of managed lands and livestock density. Lake Erie Region staff completed these calculations following the guidance of the Director's Technical Rules and the most recent SWOOP Orthoimagery (2020).

Updated managed lands calculations for the Paris North WHPAs generally show a decrease in managed lands with one exception where an increase in managed lands was noted for the Telfer WHPA-C.

Similarly, livestock density calculations for the Paris North WHPAs show a decrease in livestock density with the exception of the WHPA-D, where a new pig farm is present.

Updated managed lands and livestock density for the Bethel WHPAs remain similar to the previously calculated results, with the exception of a category change for managed lands in the WHPA-C.

Results of the managed lands and livestock density calculations are presented as draft. Results will be validated with County of Brant municipal staff and further refinement of the results will be undertaken as necessary.

Report:

Background

Lake Erie Source Protection Region received funding through the Ministry of Environment, Conservation and Parks (MECP) for the re-assessment of percentage of managed lands and livestock density for the Paris North and

Bethel wellhead protection areas (WHPAs) in the County of Brant. Re-assessments in these areas are warranted since there has been some land use change since the existing data was completed. Revised managed lands and livestock density values may result in changes to the number of significant drinking water threats identified within the WHPAs.

Managed Lands and Livestock Density Calculations

Lake Erie Region staff undertook the calculations following guidelines set out by the MECP in 2009. The assessment included a desktop exercise that used the 2020 SWOOP Orthoimagery to determine the area of managed land, and the types and sizes of livestock operations, within the wellhead protection areas. Staff used older orthoimagery, Google streetview data, and Ontario Parcel Assessment data as a reference.

Following the MECP Technical Rules, managed lands and livestock density calculations were done for areas where the vulnerability score is high enough for related activities to be low, moderate, or significant drinking water threats. For Paris North and Bethel, this includes all of the WHPA-A and WHPA-B, but only part of the WHPA-C and WHPA-D.

Results of the Managed Lands and Livestock Density Calculations

Map 1 shows the current approved managed land values for Paris North alongside the 2021 draft updated values. Most of the zones have seen a decrease in the proportion of managed lands, with the largest decrease in WHPA-C for the Gilbert wells (which has seen a change in category). These decreases are consistent with the development of farmland into urban uses in the northern parts of Paris, and a new quarry along Watts Pond Road.

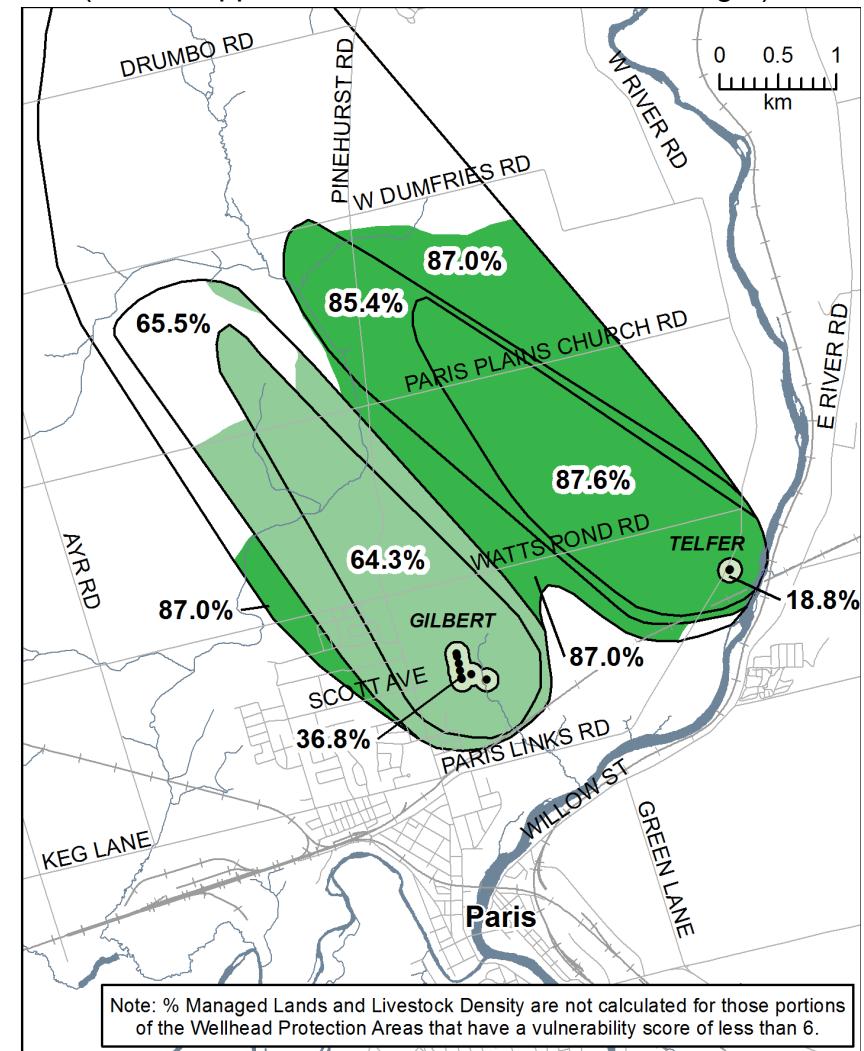
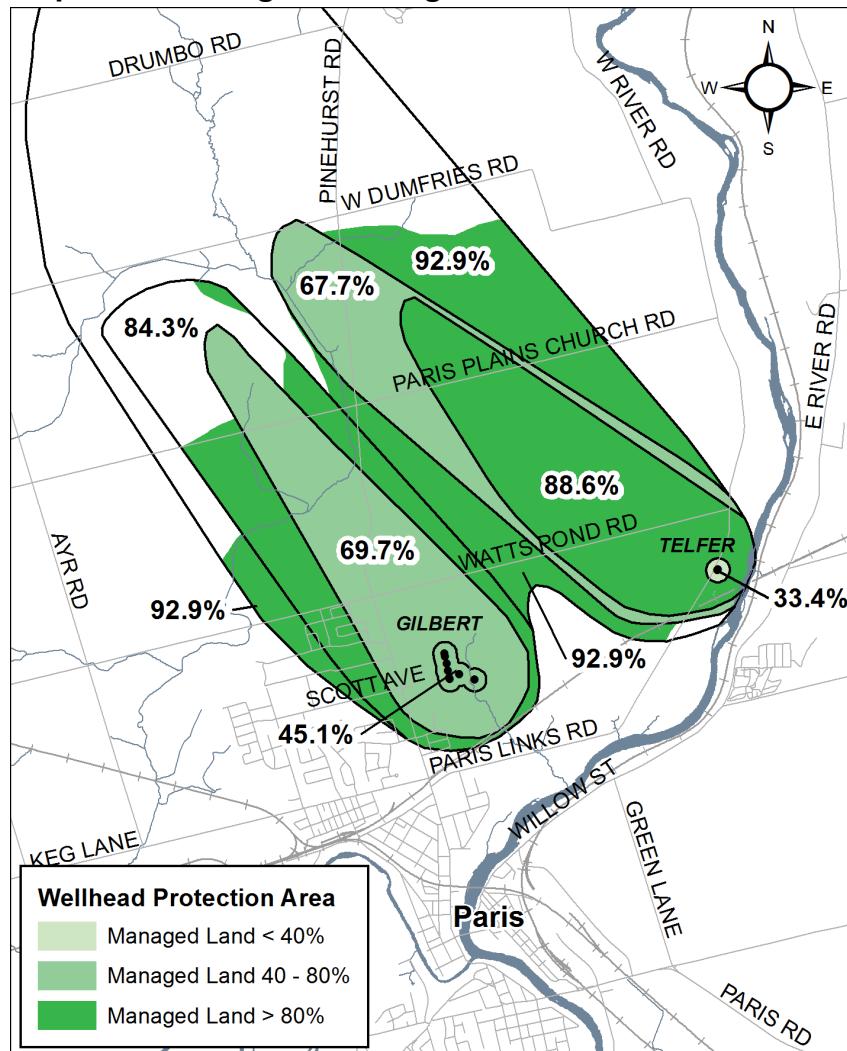
The proportion of managed land for the Telfer WHPA-C has increased from 67.7 % to 85.4%, putting this area into the highest category. A review of older orthoimagery suggests that the existing value may have been incorrect, as land use has not changed much in this area. Lake Erie Region staff believe the new values to be more accurate compared to previously calculated values.

Map 2 shows the livestock density changes for the Paris North WHPAs. WHPA-B and WHPA-C have seen decreases in the livestock density (with both WHPA-C changing into a lower category). WHPA-D has seen an increase in livestock density, which may be partly explained by the establishment of a new pig farm on West Dumfries Road. The values for WHPA-A remain the same (no nutrient units).

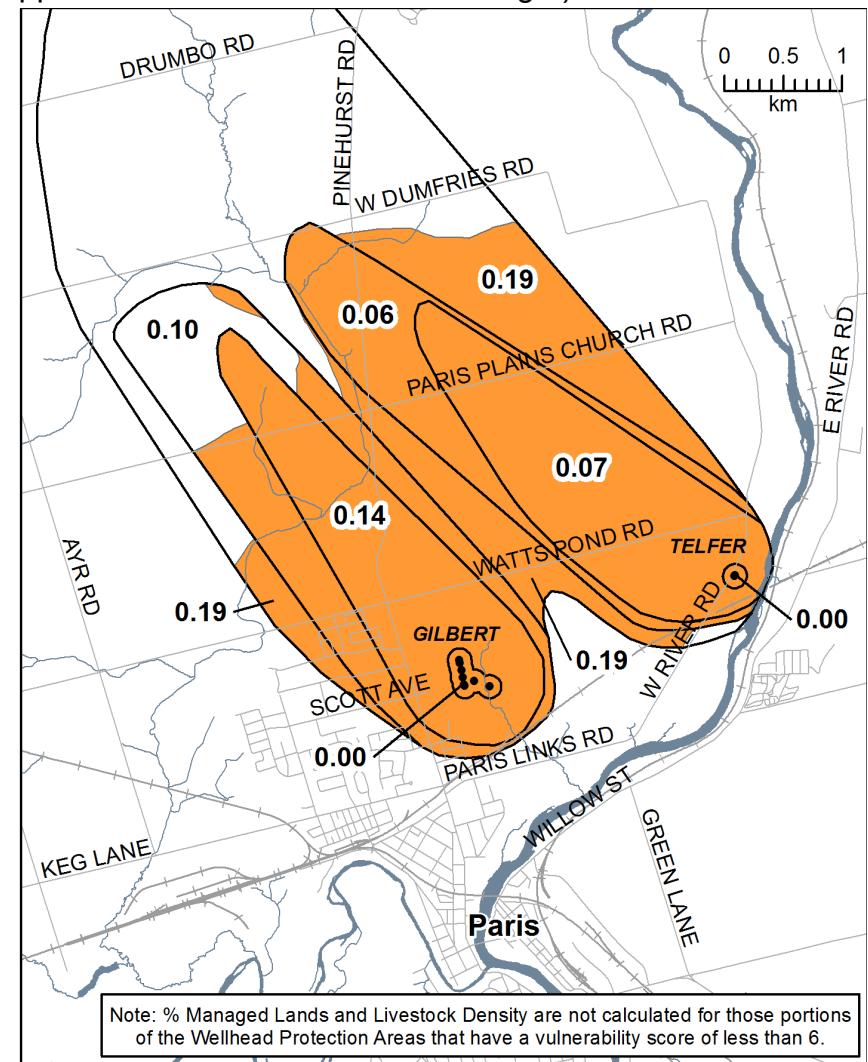
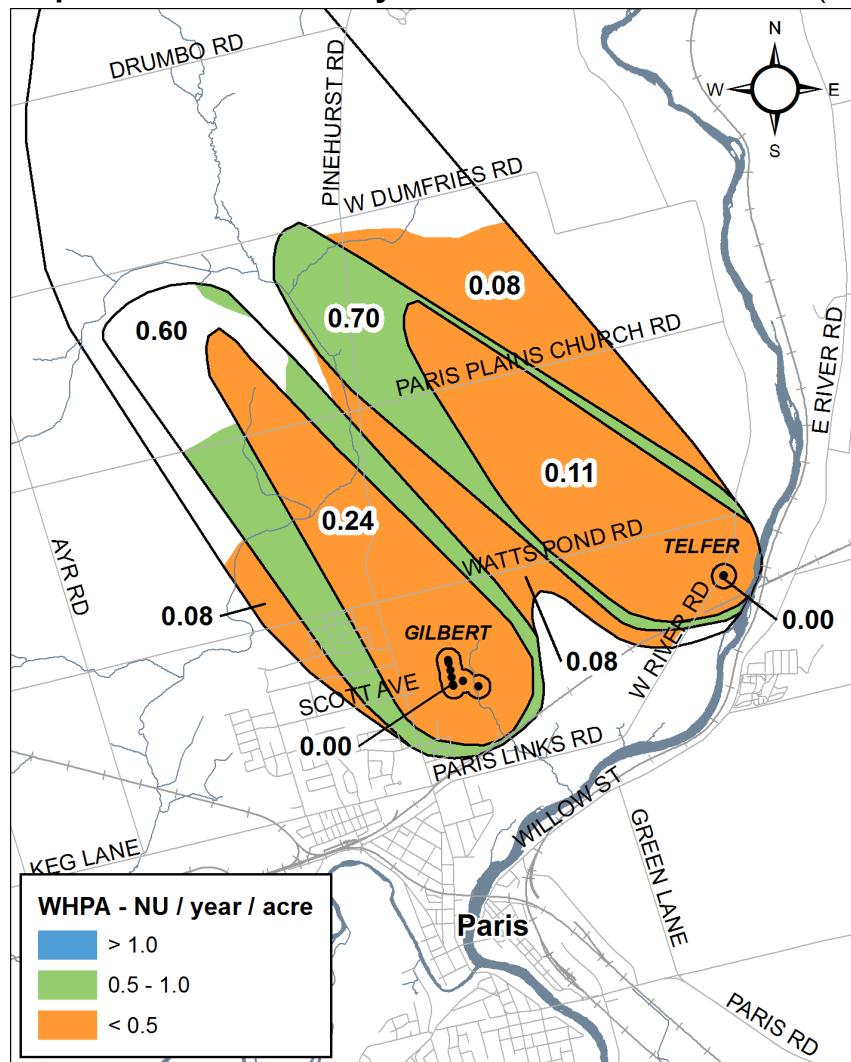
Map 3 shows the managed land changes for the Bethel WHPAs. WHPA-C and WHPA-D have seen a slight reduction in the proportion of managed land area (WHPA-C falls into a lower category). Grassy areas previously identified as being landscaped are now identified as un-maintained lands. The percent managed land value in WHPA-B remains almost the same, while it has increased in WHPA-A. The latter is largely due to the addition of landscaped surfaces in the Brant 403 Business Park, which appeared to be unmaintained previously.

Map 4 shows the livestock density changes for the Bethel WHPAs. There is a small decrease in the value for WHPA-C, and little change elsewhere. None of the categories are affected.

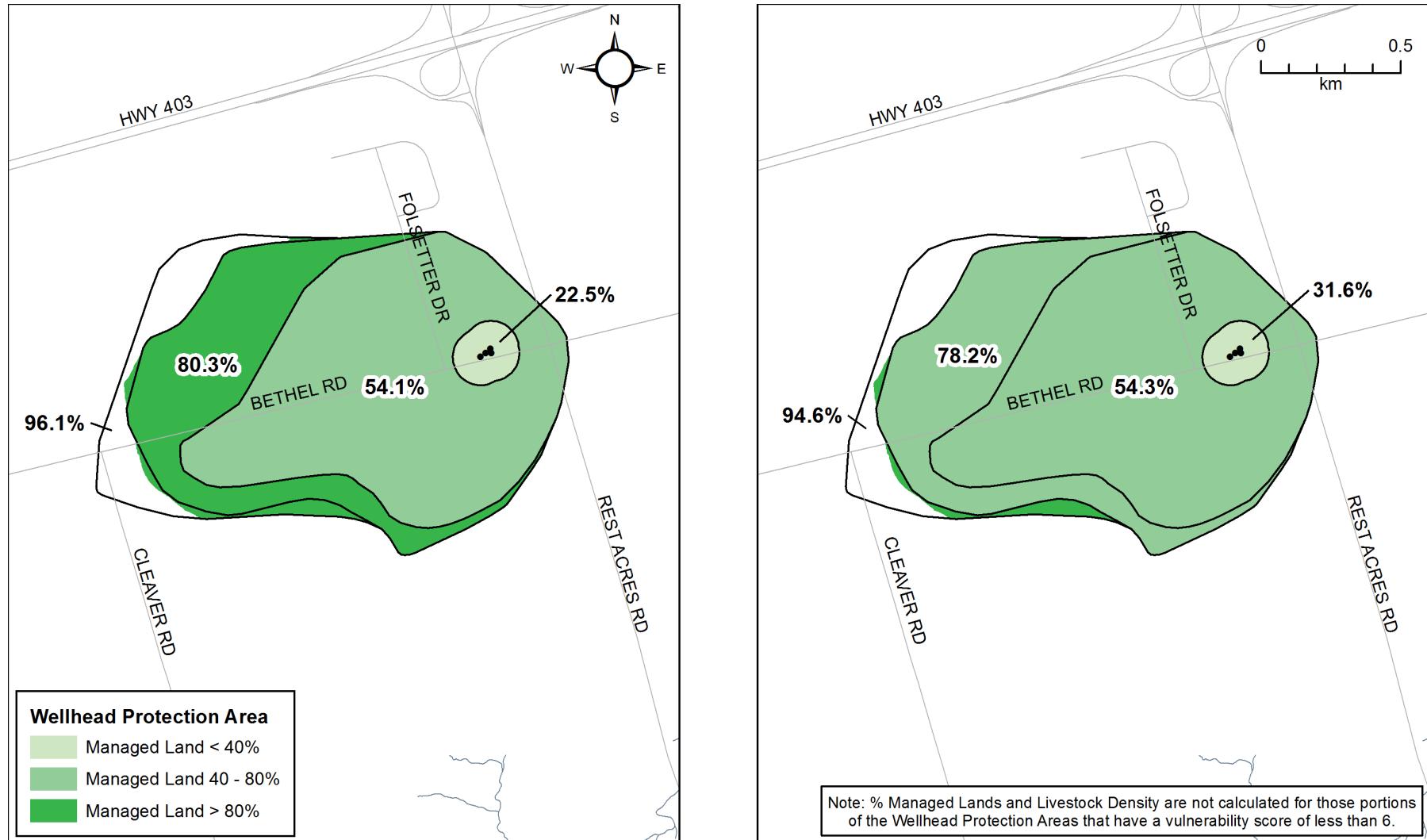
Map 1- Percentage of Managed Lands for the Paris North WHPAs (current approved on left and draft 2021 on right)



Map 2- Livestock Density for the Paris North WHPAs (current approved on left and draft 2021 on right)



Map 3- Percentage of Managed Lands for the Paris (Bethel) WHPAs (current approved on left and draft 2021 on right)



Map 4- Livestock Density for the Paris (Bethel) WHPAs (current approved on left and draft 2021 on right)



Next Steps

Lake Erie Region staff will be validating the calculated values with County of Brant municipal staff and will present any necessary updates at a future SPC meeting.

Prepared by:

Emily Hayman, M.Sc., P.Geo
Source Water Hydrogeologist

Stewart Sutherland
GIS Analyst

Approved by:

Martin Keller
Lake Erie Source Protection Program Manager

Lake Erie Region Source Protection Committee

Report Number: SPC-21-12-03

Date: December 2, 2021

To: Members of the Lake Erie Region Source Protection Committee

Subject: Assessment of Water Quality for Parameters of Concern at County of Brant Municipal Supply Wells

Recommendation:

THAT the Lake Erie Region Source Protection Committee receives report SPC-21-12-03 - Assessment of Water Quality for Parameters of Concern at County of Brant Municipal Supply Wells – for information;

AND THAT the Lake Erie Region Source Protection Committee support the Lake Erie Region staff recommendation to maintain nitrate Issues for the St. George and Paris North (Gilbert and Telfer) wellfields along with further investigation of the source of nitrate for these wellfields;

AND THAT the Lake Erie Region Source Protection Committee support the Lake Erie Region staff recommendation to add sodium as an Issue under Technical Rule 114 for the Paris (Bethel) wellfield;

AND THAT the Lake Erie Region Source Protection Committee direct Lake Erie Region staff to work with County of Brant staff to delineate an Issue Contributing Area for sodium at the Bethel wellfield and to develop policies pertaining to the sodium Issue.

Summary:

Lake Erie Source Protection Region received funding from the Ministry of Environment, Conservation and Parks to assist the County of Brant in addressing existing nitrate Issues and a concern of chloride and sodium at various wellfields.

A nitrate Issue was previously identified for the St. George wellfield due to elevated nitrate concentrations fluctuating around 5 mg/L. Nitrate concentrations remain status quo. Further investigation into the sources of nitrate at the St. George wellfield may help tailor the County of Brant's monitoring program and source protection policies.

The Paris North (Gilbert and Telfer) wellfields have a nitrate Issue due to elevated nitrate concentrations ranging from 5 mg/L to 11 mg/L. In the past few years, the nitrate concentrations in the Gilbert overburden wells have been trending upward. The Maximum Acceptable Concentration (MAC) of 10 mg/L has been exceeded on occasion. Recent nitrate concentrations at Telfer remain status quo between 5 mg/L and 8 mg/L.

An increasing trend for both chloride and sodium is observed for the Paris (Bethel) wellfield. The increase in sodium is elevated beyond 20 mg/L, which is the threshold whereby the local Medical Officer of Health must be notified.

Staff recommend that the nitrate Issues remain for the St. George and Paris North (Gilbert and Telfer) wellfields along with further investigation of the source of nitrate for these wellfields. Staff also recommends that a sodium Issue be identified under Technical Rule 114 for the Bethel wellfield and that sodium and chloride continue to be monitored.

Report:

Background

Lake Erie Source Protection Region received funding from the Ministry of Environment, Conservation and Parks for the assessment of existing water quality monitoring data in the County of Brant. More specifically, the 2021/2022 fiscal funding is to be used to evaluate where changing trends in nitrate, chloride, and/or sodium concentrations at select County of Brant wellfields are determined to have an impact on the number of significant drinking water threats. Changes to the number of significant drinking water threats may change due to the addition/removal of an Issue and/or Issue contributing area.

The following parameters of concern were evaluated at specified wellfields within the County of Brant:

- Nitrate concentrations at the St. George overburden wellfield
- Nitrate concentrations at the Paris North (Gilbert and Telfer) wellfields
- Chloride and sodium concentrations at the Paris (Bethel) wellfield

St. George Wellfield – Assessment of Nitrate Concentrations

The existing St. George wellfield consists of three production wells: Well 1, Well 2 and Well 3, all screened in a shallow overburden aquifer. Land use in the vicinity of the St. George wellfield is agricultural and residential development. Nitrate was previously identified as an Issue for the St. George wellfield under Technical Rule 114. The nitrate Issue Contributing Area encompasses WHPA-A through WHPA-D of the St. George wellfield.

A recent analysis of raw water quality monitoring data up to August 2021 was completed to re-evaluate the previously identified nitrate Issue. **Figure 1** below shows the nitrate concentrations at the St. George overburden supply wells from June 2006 to August 2021. The Maximum Acceptable Concentration (MAC) for nitrate is 10 mg/L. Raw water nitrate concentrations at the overburden supply wells are elevated above the nitrate half MAC for the period of 2006 to 2010. For the period of 2010 to 2021, raw water nitrate concentrations generally fluctuate around the half MAC (5 mg/L) with no prominent increasing or decreasing trend.

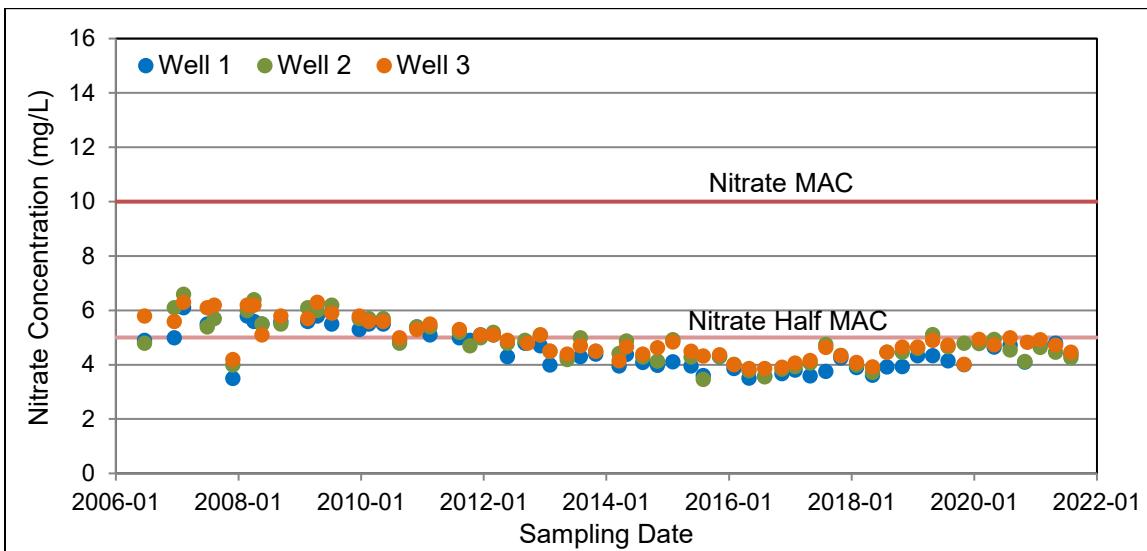


Figure 1: Nitrate Concentrations at the St. George Supply Wells

A current Class EA addressing redundancy/security of water supply is leading toward the preferred alternative being two new bedrock supply wells located approximately 1.4 kilometers north-west of the existing wellfield. The new wellfield is located in the nitrate Issue Contributing Area of the existing wellfield. As such, it will be prudent to monitor nitrates from the proposed production wells to determine if nitrates are also a concern in the bedrock aquifer and if so, act accordingly.

Lake Erie Region staff, in consultation with County of Brant staff, recommend that:

- nitrate remain identified as an issue for the St. George wellfield under Technical Rule 114 due to elevated nitrate concentrations and the unknown source of nitrate contamination;
- further investigation of the nitrate sources be undertaken by the County of Brant staff with support from Lake Erie Region staff; and
- the proposed new wells be included in the nitrate investigations.

Paris North: Gilbert and Telfer Wellfields – Assessment of Nitrate Concentrations

The Paris North water supply consists of two wellfields, Gilbert and Telfer. The Gilbert wellfield contains eight active production wells with six overburden wells (P210, P211, P212, P213, P214 and P215) and two bedrock wells (P28 and P29). The Telfer wellfield includes two active production wells; P31 (completed in deep overburden) and P32 (completed in upper bedrock). Land use in the vicinity of the Paris North wellfields is agricultural and residential development. The Dufferin aggregate pit is located between the two wellfields.

Nitrate was previously identified as an issue for both the Gilbert and Telfer wellfields under Technical Rule 114. The Issue Contributing Areas for the Gilbert and Telfer wellfields are delineated as a 25 year time of travel zone based on average current pumping rates from 2008 to 2010.

A recent analysis of raw water quality monitoring data at the supply wells was completed up to August 2021 to re-evaluate the previously identified nitrate issue.

Figures 2 and 3 below show data from June 2008 to August 2021. Raw water nitrate concentrations at the Gilbert overburden supply wells are elevated with concentrations fluctuating from approximately 5 mg/L to 11 mg/L. Nitrate concentrations at the Gilbert overburden supply wells have exceeded the MAC on several occasions, more notably from 2018 to 2021. Concentrations that appear as 0 mg/L on the figure below are non-detect results for nitrate from the Gilbert bedrock wells.

Raw water nitrate concentrations at the Telfer supply wells are elevated with concentrations fluctuating from approximately 5 mg/L to 10 mg/L with no prominent increasing or decreasing trend. Nitrate concentrations at the Telfer supply wells have not exceeded the MAC since February 2012.

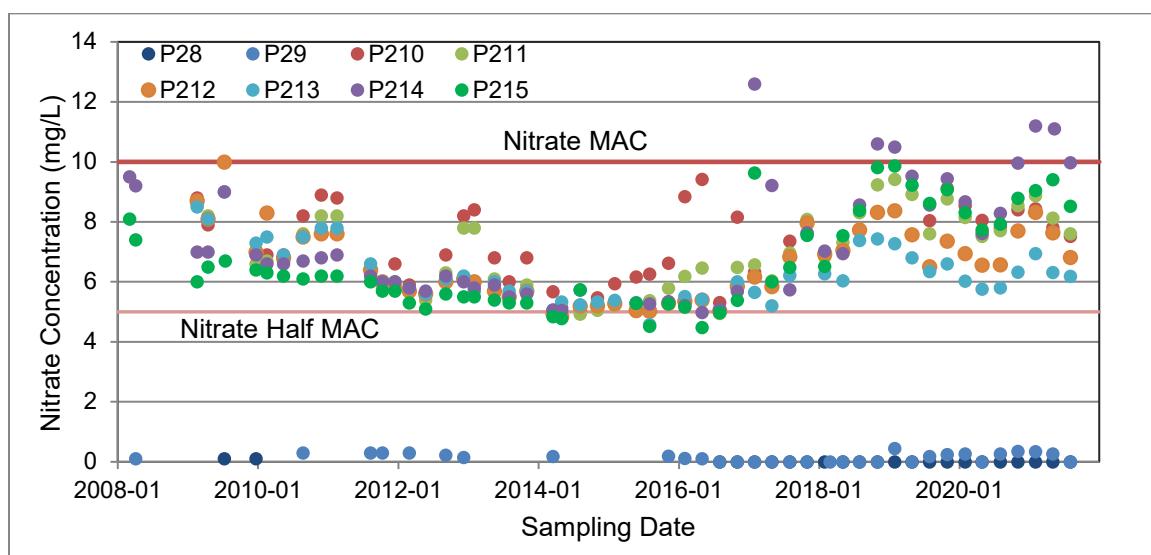


Figure 2: Nitrate Concentrations at the Gilbert Supply Wells

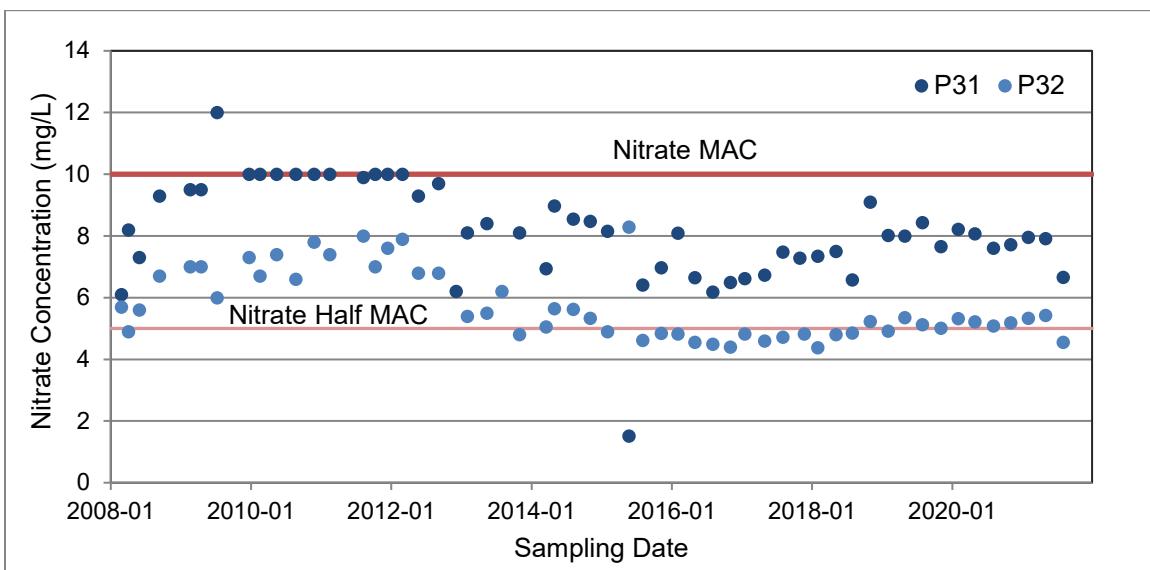


Figure 3: Nitrate Concentrations at the Telfer Supply Wells

Lake Erie Region staff, in consultation with County of Brant staff, recommend that:

- nitrate remain identified as an issue for the St. George wellfield under Technical Rule 114 due to elevated nitrate concentrations and the unknown source of nitrate contamination; and
- further investigation of the nitrate sources be undertaken by the County of Brant staff with support from Lake Erie Region staff.

Paris (Bethel) Water Supply System – Assessment of Chloride and Sodium Concentrations

The Bethel wellfield contains four active production wells (P51, P52, P53 and P54). The four wells are completed in intermediate to deep overburden sediments and screened in an unconfined aquifer comprised of sand and gravel. Land use in the vicinity of the Bethel wellfield is mainly industrial with paved parking lots, large buildings and a storm water management pond. There is also an aggregate mine to the south of the wellfield and the Ministry of Transportation winter maintenance yard with covered salt domes directly to the northeast of the wellfield.

No issues are currently identified at the Bethel wellfield under Technical Rule 114. Recent concerns of increasing sodium and chloride concentrations at the Bethel wellfield have prompted an analysis of raw supply well water quality data.

Chloride Concentrations

Figure 4 shows chloride concentrations from February 2018 to August 2021. Raw water chloride concentrations at the Bethel wellfield are below the half Aesthetic Objective (AO) (125 mg/L) with concentrations ranging from 43 mg/L in 2018 to 91 mg/L in 2021.

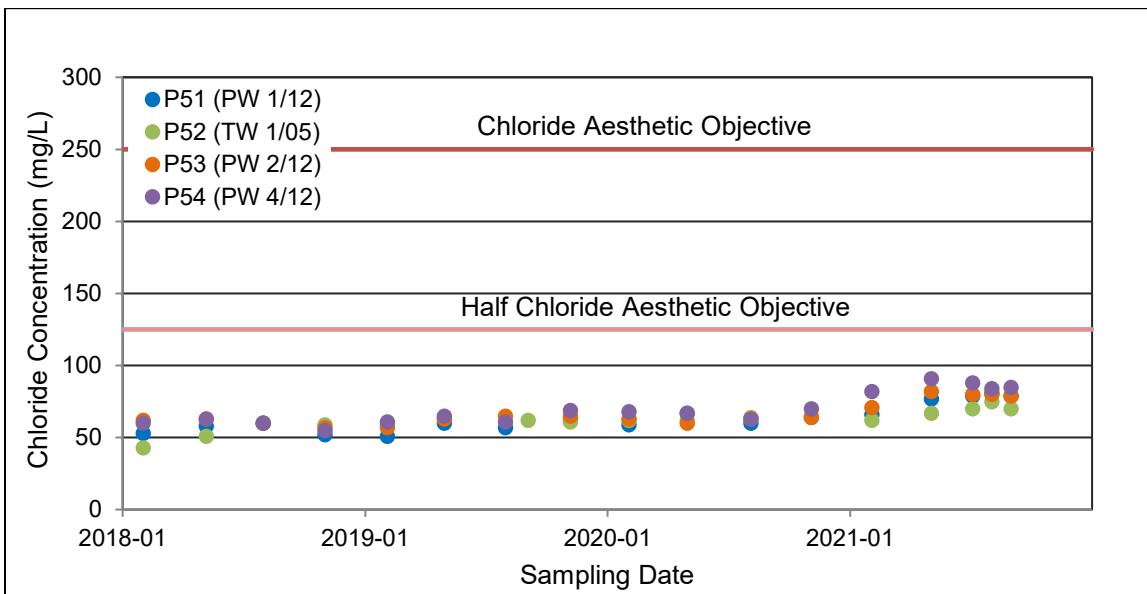


Figure 4: Chloride Concentrations at the Bethel Supply Wells

Sodium Concentrations

Figure 5 shows sodium concentrations from February 2013 to August 2021. Raw water sodium concentrations are elevated above the half AO (100 mg/L) with concentrations ranging from 100 mg/L to 150 mg/L for the period of 2017 to 2021. Prior to 2017, sodium concentrations remained below the half AO, with an increase in concentrations noted in early 2017. The sodium concentrations corresponding to the Bethel wellfield exceed 20 mg/L, which is the threshold whereby the local Medical Officer of Health must be notified.

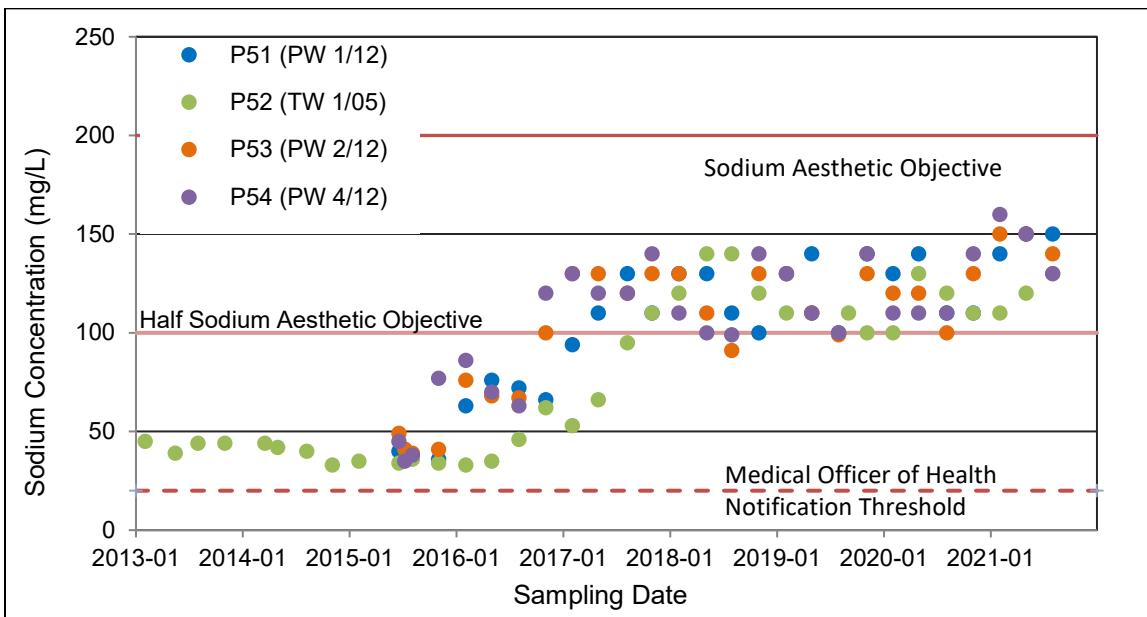


Figure 5: Sodium Concentrations at the Bethel Supply Wells

Lake Erie Region staff, in consultation with County of Brant staff, recommend that:

- the County of Brant continue to monitor and report on chloride and sodium concentrations for the Bethel water supply system;
- sodium be identified as an Issue for the Bethel water supply system under Technical Rule 114; and
- Lake Erie Region staff work with County of Brant staff to delineate an Issue Contributing Area for sodium at the Bethel wellfield and develop policies pertaining to the sodium issue.

Prepared by:

Emily Hayman, M.Sc., P.Geo
Source Water Hydrogeologist

Approved by:

Martin Keller
Lake Erie Source Protection Program Manager

Lake Erie Region Source Protection Committee

Report number: SPC-21-12-04

Date: December 2, 2021

To: Members of the Lake Erie Region Source Protection Committee

Subject: Guelph-Guelph/Eramosa Water Quantity Policy Development Progress Update

Recommendation:

THAT the Lake Erie Region Source Protection Committee receives report SPC-21-12-04– Guelph-Guelph/Eramosa Water Quantity Policy Development Progress Update – for information.

Summary:

Further progress is being made in developing water quantity policies for the Guelph-Guelph/Eramosa (GGET) Wellhead Protection Area Quantity (WHPA-Q) and Intake Protection Zone Quantity (IPZ-Q).

This report provides updates and revisions on draft policies that the project team has reached consensus on. A full suite of draft water quantity consensus policies are attached in Appendices A to E.

Updates and revisions to draft consensus policies include:

- New draft land use planning policy for Guelph and Wellington to ensure developments will not adversely impact municipal supplies (Appendix A – policy T19-Growth-4)
- New draft specify action policy for Guelph and Wellington to use the Tier 3 Model when assessing new or expanded water takings (Appendix A – policy T-19-Modelling)
- Inclusion of new draft policies for the Township of East Garafraxa applicable in IPZ-Q (Appendix E)

A further meeting between City of Guelph and Ministry staff has been held on November 24, 2021 and is scheduled for December 6, 2021 to continue the discussions about approaches for prescribed instrument policies addressing Permits To Take Water.

Further updates on policy development will be presented to the SPC at the next committee meeting.

Report:

Further progress is being made in developing water quantity policies for the Guelph-Guelph/Eramosa (GGET) Wellhead Protection Area Quantity (WHPA-Q) and Intake Protection Zone Quantity (IPZ-Q). Draft policies that the Project Team

reached consensus on were presented to the Source Protection Committee (SPC) at committee meetings in January 2021 (Report SPC-21-01-03), April 2021 (SPC-21-04-03), June 2021 (SPC-21-06-02), and September 2021 (SPC-21-09-03).

This report provides updates and revisions on draft policies that the project team has reached consensus on. A full suite of draft water quantity consensus policies are attached in Appendices A to E. Updates and revisions are highlighted in red.

Updates and revisions to draft consensus policies include the following:

- New draft land use planning policy for Guelph and Wellington to ensure developments will not adversely affect municipal supplies. The draft policy requires the municipality to update their Official Plan and requires proponents to include a Drinking Water Threat Disclosure Report and/or Hydrogeological Impact Assessment as part of applications under the Planning Act for development, redevelopment, and site alterations (Appendix A – policy T19-Growth-4).
- New draft specify action policy for Guelph and Wellington to use the Tier 3 Model when assessing new or expanded water takings. The draft policy requires the proponent of a development that may require water taking greater than 50,000 L/day to request the City of Guelph to run the Guelph-Guelph/Eramosa Tier 3 Model to assess the risk of the proposed water taking (Appendix A – policy T-19-Modelling).
- Inclusion of new draft policies for the Township of East Garafraxa applicable in IPZ-Q. The northern most portion of IPZ-Q extends into the Township of East Garafraxa, and three properties within the Township are within the IPZ-Q. In collaboration with the Township, a subset of policies developed for Wellington and Halton has been identified to be applicable in the portion of IPZ-Q in East Garafraxa. These policies will be included in Chapter 4 (Townships of Amaranth and East Garafraxa) of the Grand River Source Protection Plan (Appendix E).

The draft policies presented in the Appendices are a work in progress. Draft policies may change as further project team discussions occur and information is shared among municipalities and comments are received.

A further meeting between City of Guelph and Ministry staff has been held on November 24, 2021 and is scheduled for December 6, 2021 to continue the discussions about approaches for prescribed instrument policies addressing Permits To Take Water. Draft prescribed instrument policies will be presented at a future SPC meeting, following discussions and recommendations from the project team.

Prepared by:

Martin Keller
Lake Erie Source Protection Program Manager

Appendix A: Draft Consensus Policies T19 Consumptive Water Takings

Optimization Programs for Municipal Water Supply Systems

T19-Opt-1: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
N/A	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system as prescribed by the Clean Water Act, 2006, The City of Guelph shall update on a regular basis the Water Supply Master Plan and the Guelph-Guelph/Eramosa Tier 3 Study to secure new municipal water supplies, optimize existing supplies and new water sources and improve demand management initiatives including the water efficiency strategy.	N/A	N/A

T19-Opt-2: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, within the Guelph-Guelph/Eramosa WHPA-Q, Municipalities shall collaborate with the City of Guelph to optimize their water systems based on the results of the Tier 3 Study, and where appropriate develop, maintain, and enhance water supply system optimization programs.	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system as prescribed by the Clean Water Act, 2006, The City of Guelph shall collaborate with the municipalities in the County of Wellington within the Guelph-Guelph/Eramosa WHPA-Q to optimize water supply systems based on the results of the Guelph-Guelph/Eramosa Tier 3 Study, and where appropriate develop, maintain, and enhance water supply optimization programs.	N/A	N/A

Incentive Programs for Water Conservation and Efficiency

T19-Eff-1/2: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
Existing policy WC-CW-1.6 The County and/or municipality, in collaboration with other bodies and levels of government wherever possible, may develop and implement incentive programs directed at various significant threat activities and/or	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system as prescribed by the Clean Water Act, 2006, The City of Guelph shall establish and provide ongoing support	To ensure that any Consumptive Water Taking or Recharge Reducing Activity within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Regional Municipality of Waterloo shall support any water efficiency education and outreach programs developed by	To ensure that any Consumptive Water Taking ceases to be or never becomes a significant drinking water threat, as prescribed by the Clean Water Act, 2006, Halton Region will establish

Wellington	Guelph	Waterloo	Halton
condition sites prescribed under the Clean Water Act, 2006, where such programs are deemed necessary and/or appropriate by the County and/or municipality, subject to available funding.	to the Water Efficiency Strategy including but not limited to incentives, rebates, education and outreach programs to promote water conservation and demand management for all water users within the City of Guelph.	the Township of Centre Wellington and/or City of Guelph to promote water conservation, demand management and use of best management practices to maintain groundwater recharge for private water users within the Region of Waterloo (ref. policy RW-CW-62)	and/or maintain a water conservation plan that may include incentives, rebates, education and outreach efforts to promote water conservation.

Guidelines for Water Re-use Systems and Technologies

T19-Reuse-1: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks is requested to develop water reuse system guidelines for potable and non-potable water use and re-use systems and technologies.	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks is requested to develop water reuse system guidelines to promote potable and non-potable water reuse and reuse systems and technologies.	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks is requested to develop water reuse system guidelines for potable and non-potable water use and re-use systems and technologies.	To ensure that any Consumptive Water Taking ceases to be or never becomes a significant drinking water threat, as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks is requested to develop water re-use system guidelines for potable and non-potable water use and re-use systems and technologies.

Growth and Development

T19-Growth-1: Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, the County in consultation with the Municipalities shall take into consideration water quantity constraints identified through the Tier 3	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system as prescribed by the Clean Water Act, 2006, The Ministry of Municipal Affairs and Housing should ensure that assessment and determination of population and employment targets as part of the review and amendment of the Places to Grow Plan include consideration of the Guelph-Guelph/Eramosa Tier 3 Study results and sustainable water quantities for current and future municipal water supplies to support growth targets and that	N/A	N/A

Wellington	Guelph	Waterloo	Halton
Study when allocating projected growth as part of a municipal comprehensive review.	the Ministry of Municipal Affairs and Housing have meaningful consultation with the City of Guelph as part of this review and give due regard to comments provided.		

T19-Growth-3: Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, within the Guelph-Guelph/Eramosa WHPA-Q, the Municipalities shall collaborate with the City of Guelph on water demand management planning for their respective municipal drinking water systems when identifying future projects with respect to new water supply, assessing and establishing new municipal drinking water sources through engagement in the study processes and consultation through the technical working group.	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, The City of Guelph shall collaborate with municipalities in the County of Wellington on water demand management planning for their respective municipal drinking water systems when identifying future projects with respect to new water supply, assessing and establishing new municipal drinking water sources through engagement in the study processes and consultation through the technical working group.	N/A	N/A

T19-Growth-4: Future: Land Use Planning

Wellington	Guelph	Waterloo	Halton
<p>To ensure that any Consumptive Water Taking never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the CWA, the County shall amend its Official Plan to establish policies, applicable to any New development for groundwater taking within a WHPA-Q.</p> <p>The County Official Plan policies shall require that it be demonstrated that such development will not adversely impact the municipal supply based on appropriate study including consideration of the Tier 3 Study results based on planned growth and prolonged drought conditions.</p> <p>The Planning Approval Authority shall use its discretion to implement the requirements of this policy to the extent feasible and practicable given the specific circumstances of the proposed water taking.</p> <p>The following requirements shall be added to the County Official Plan in order to provide further clarification to County Official Plan policy 4.9.5.4 (“Drinking Water Threat Disclosure Reports”) with respect to applications</p>	<p>To ensure that any Consumptive Water Taking never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the CWA, the City of Guelph shall amend its Official Plan to establish policies, applicable to any new or expanded existing development for groundwater taking within a WHPA-Q.</p> <p>The City of Guelph Official Plan policies shall require that it be demonstrated, as appropriate, that such development will not adversely impact the municipal supply based on appropriate study including consideration of the Tier 3 Study results based on planned growth and prolonged drought conditions.</p> <p>The following requirements shall be added to the City of Guelph Official Plan with respect to applications under the Planning Act for development or redevelopment within a WHPA-Q:</p>	N/A	N/A

Wellington	Guelph	Waterloo	Halton
<p>under the Planning Act for development, redevelopment and site alteration within a WHPA-Q:</p> <ul style="list-style-type: none"> a) that a Drinking Water Threat Disclosure Report be added to the list of studies in the Official Plan that may be required for a complete application; b) that a Drinking Water Threat Disclosure Report shall be a required component of a complete application under the Planning Act to be located within a WHPA-Q (i.e. official plan amendment, subdivision, condominium, rezoning) where the development that is the subject of the application requires or could require water taking; c) that a Hydrogeological Impact Assessment shall be a required component of a complete application under the Planning Act to be located within a WHPA-Q (i.e. official plan amendment, subdivision, condominium, rezoning) where the development that is the subject of the application requires or could require water taking in excess of 50,000 litres per day; d) that a Drinking Water Threat Disclosure Report shall be required for any development, which requires site plan approval pursuant to section 41 of the Planning Act, and which is located on lands within a WHPA-Q, where the development that is the subject of the application requires or could require water taking; and e) that a Hydrogeological Impact Assessment shall be required for any development, which requires site plan approval pursuant to section 41 of the Planning Act, and which is located on lands within a WHPA-Q, where the development that is the subject of the application requires or could require water taking in excess of 50,000 litres per day. 	<ul style="list-style-type: none"> a) that a Drinking Water Threat Disclosure Report be added to the list of studies in the Official Plan that may be required for a complete application; b) that a Drinking Water Threat Disclosure Report shall be a required component of a complete application under the Planning Act to be located within a WHPA-Q (i.e. official plan amendment, subdivision, condominium or rezoning) where the development that is the subject of the application requires or is proposed to require water taking; c) that a Hydrogeological Impact Assessment shall be a required component of a complete application under the Planning Act to be located within a WHPA-Q (i.e. official plan amendment, subdivision, condominium or rezoning) where the development that is the subject of the application requires or is proposed to require water taking in excess of 50,000 litres per day; d) that a Drinking Water Threat Disclosure Report shall be required for any development, which requires site plan approval pursuant to section 41 of the Planning Act, and which is located on lands within a WHPA-Q, where the development that is the subject of the application requires or is proposed to require water taking; and e) that a Hydrogeological Impact Assessment shall be required for any development, which requires site plan approval pursuant to section 41 of the Planning Act, and which is located on lands within a WHPA-Q, where the development that is the subject of the application requires or is proposed to require water taking in excess of 50,000 litres per day. 		

T19-Modelling: Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the CWA, for any New development that requires or could require water taking in excess of	To ensure that any Consumptive Water Taking never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the CWA, for any new or proposed expansion to a water taking in excess of 50,000	N/A	N/A

Wellington	Guelph	Waterloo	Halton
50,000 litres per day for groundwater taking within the GGET WHPA-Q, the County and / or Municipality shall require the applicant, where appropriate, on a user fee basis, to request the City of Guelph to run the Guelph-Guelph/Eramosa Tier 3 Model to assess the risk of the proposed water taking associated with the proposed New development.	litres per day for a groundwater taking within the GGET WHPA-Q within the City of Guelph, the City of Guelph shall require the applicant, where appropriate, on a user fee basis, to request the City of Guelph to run the Guelph-Guelph/Eramosa Tier 3 Model to assess the risk of the proposed water taking.		

T19-Growth-5: Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the CWA, the County in consultation with the Municipalities, when assessing settlement area expansions within a WHPA-Q as part of a municipal comprehensive review or as otherwise provided by the Provincial Growth Plan for the Greater Golden Horseshoe, shall be satisfied that such expansion will not adversely impact the aquifer's ability to meet the municipal water supply requirements for current and planned service capacity. Where appropriate, this assessment shall consider the use of the Tier 3 Model or other equivalent means. The required data-gathering and analysis to demonstrate no adverse impact should be completed through collaboration and coordination among the County, the affected Municipality(ies), the Water Operating Authority, the Grand River Conservation Authority, Province and / or private developers. This policy applies to settlement area expansions where cumulative water taking to service the expansion is greater than 50,000 litres per day.	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, The City, when assessing growth through a water supply master plan to support a municipal comprehensive review or as otherwise required under the Planning Act and/or Provincial Growth Plan for the Greater Golden Horseshoe, shall be satisfied that such growth will not adversely impact the aquifer's ability to meet the municipal water supply requirements for current and planned service capacity. This assessment shall use the Tier 3 Model, Tier 3 Study results / recommendations and Water Supply Master Plan results / recommendations or other equivalent means. The required data-gathering and analysis to demonstrate no adverse impact should be completed through collaboration and coordination among the City, County of Wellington municipalities, the Grand River Conservation Authority, and/or the Province of Ontario as appropriate.	N/A	N/A

T19-Growth-6: Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, in the Guelph-Guelph/Eramosa WHPA-Q, where municipal water services are available, the municipalities in the County of Wellington should consider adopting municipal by-laws to manage and/or restrict private water takings.	To ensure that any Consumptive Water Taking within a WHPA-Q never becomes a significant drinking water threat to the City of Guelph municipal drinking water system as prescribed by the Clean Water Act, 2006, the City of Guelph shall enact a by-law under the Municipal Act to regulate new private wells where municipal water services are available.	N/A	N/A

T19-Growth-7: Future: Land Use Planning

Wellington	Guelph	Waterloo	Halton
<p>To ensure that any Consumptive Water Taking never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, Municipalities, when reviewing planning applications for New development requiring a new or amended PTTW for groundwater taking within a WHPA-Q and IPZ-Q, shall consult with the MECP to discuss any necessary approval conditions of the PTTW.</p> <p>Municipalities shall consider the use of holding zone provisions or a community planning permit in order to ensure that a PTTW, if required, is in place prior to the commencement of any development activity.</p>	<p>To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the following shall apply:</p> <ul style="list-style-type: none"> a) The City, when reviewing planning applications for development requiring a new or amended PTTW for groundwater taking within a WHPA-Q, shall consult with the Ministry of the Environment, Conservation and Parks to discuss any necessary approval conditions of the PTTW. b) That the City not permit development within the WHPA-Q where a new or amended PTTW is required for a development that would result in permanent dewatering. 	N/A	<p>To ensure an activity that takes water from an aquifer or surface water body without returning the water to the same aquifer or surface water body ceases to be or never becomes a significant drinking water threat, where an increased or new water taking would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, the municipal planning authority, when reviewing planning applications for new development requiring a new or amended PTTW for groundwater taking within the WHPA-Q and IPZ-Q, shall consult with the Ministry of the Environment, Conservation and Parks to discuss any necessary approval conditions of the PTTW.</p>

T19-Growth-8: Future: Specify Action

Wellington	Guelph	Waterloo	Halton
N/A	<p>To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks, in consultation with the City of Guelph and the Grand River Conservation Authority, shall use the Tier 3 Model, Tier 3 Study results / recommendations and Water Supply Master Plan results / recommendations in its evaluation of new or expanded municipal takings through the PTTW process and should require the use the Tier 3 Model and Tier 3 Study results / recommendations in Class Environmental Assessment processes, where those new or expanded municipal takings could affect the assigned risk level for the City of Guelph WHPA-Q. For context, this policy is meant to provide support, through the Ministry of the Environment, Conservation and Parks approval and / or review processes to ensure the provision and distribution of municipal water supply to support the City of Guelph population and growth forecasts.</p>	N/A	N/A

Drought Management

T19-Drought-1: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
N/A	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system as prescribed by the Clean Water Act, 2006, the City of Guelph develop a drought response plan for the City's municipal drinking water supply to mitigate the potential impacts of a longer-term (greater than 3 years) drought. This plan shall be completed within three years of this policy taking effect.	N/A	N/A

Monitoring

T19-Mon-1: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
N/A	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system as prescribed by the Clean Water Act, 2006, the City of Guelph, working with the GRCA, shall establish, undertake and maintain surface water and groundwater monitoring programs to assist in characterization and management of the subwatersheds and to ensure the long-term sustainability of the municipal water supply. Monitoring results shall be provided to the MECP on an annual basis. Where funding is not provided by MECP for this program, the City of Guelph shall develop and fund this program for its own use.	N/A	N/A

T19-Mon-2: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, where funding is available, the Municipalities collect and assess water usage data from water takers within the Guelph-Guelph/Eramosa WHPA-Q and exempted from the Permit to Take Water (PTTW) requirements, such that the data can be used in updates to the Tier 3 Model.	N/A	N/A	N/A

Prioritization

T19-Prior-1: Future: Specify Action

Wellington	Guelph	Waterloo	Halton
N/A	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the MECP is requested to prioritize municipal water use as a component of future water quantity management.	N/A	N/A

T19-Prior-2: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of Environment, Conservation and Parks (MECP) and the Ministry of Natural Resources and Forestry (MNRF) should ensure source protection is included as a risk factor of sites with Permits to Take Water (PTTW) and / or Aggregate Resources Act, 1990 Licenses in WHPA-Q Areas in the ministry local office risk-based inspection planning process and compliance response planning. (ref. policy WC-NB-22.14)	N/A	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of Environment, Conservation and Parks (MECP) and Ministry of Natural Resources and Forestry (MNRF) should ensure source protection is included as a risk factor of Sites with Permits to Take Water (PTTW) and / or Aggregate Resources Act, 1990 Licenses in WHPA-Q Areas in the Guelph District Office risk-based compliance inspection planning process. (ref. policy RW-NB-67)	To ensure that any Consumptive Water Taking ceases to be or never becomes a significant drinking water threat, as prescribed by the Clean Water Act, 2006, the Ministry of Environment, Conservation and Parks (MECP) and Ministry of Natural Resources and Forestry (MNRF) are requested to prioritize inspections and abatement of these activities for existing Permits to Take Water (PTTW) and/or Aggregate Resources Act (ARA) approvals.

Funding

T19-Fund-1: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
see combined T19/T20 policy	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the City of Guelph requests MECP to provide ongoing funding to maintain and update the Guelph-Guelph/Eramosa Tier 3 Model. Where funding is not provided, the City of Guelph shall fund for its own use the maintenance and updating of the Guelph-Guelph/Eramosa Tier 3 Model, including the climate change assessment model, to ensure the long-term sustainability of municipal water supply systems in the City of Guelph and develop a user pay system for other users of the Guelph-Guelph/Eramosa Tier 3 Model.	N/A	see combined T19/T20 policy

Managing Water Takings

T19-Dewater-6: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
N/A	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system as prescribed by the Clean Water Act, 2006, the City of Guelph ensure that existing and future non-municipal water takings for non-potable purposes, where a PTTW is not required, adhere to the City's outside water by-law to support demand reduction activities during times of water stress.	N/A	N/A

Information Sharing

T19-EASR: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks should update regulation to provide automatic notification to the Municipalities and the Operating Authority of Environmental Activity and Site Registry (EASR) registrations pertaining to construction dewatering, road construction and pumping tests when an EASR registration is located within a wellhead protection area defined pursuant to the Clean Water Act, 2006.	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks should update regulation to provide automatic notification to the City of Guelph and the Operating Authority of Environmental Activity and Site Registry (EASR) registrations pertaining to construction dewatering, road construction and pumping tests when an EASR registration is located within a wellhead protection area defined pursuant to the Clean Water Act, 2006.	To ensure that any Consumptive Water Taking within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks should update regulation to provide automatic notification to the Regional Municipality of Waterloo and the Operating Authority of Environmental Activity and Site Registry (EASR) registrations pertaining to construction dewatering, road construction and pumping tests when an EASR registration is located within a wellhead protection area defined pursuant to the Clean Water Act, 2006.	To ensure that any Consumptive Water Taking ceases to be or never becomes a significant drinking water threat, where this activity is or would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks should update regulation to provide automatic notification to Halton Region and the Operating Authority of Environmental Activity and Site Registry (EASR) registrations pertaining to construction dewatering, road construction and pumping tests when an EASR registration is located within a wellhead protection area defined pursuant to the Clean Water Act, 2006.

Appendix B: DRAFT Consensus Policies T20 Consumptive Water Takings

Incentive Programs for Groundwater Recharge

T20-1: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
<p>Existing policy WC-CW-1.6</p> <p>The County and/or municipality, in collaboration with other bodies and levels of government wherever possible, may develop and implement incentive programs directed at various significant threat activities and/or condition sites prescribed under the Clean Water Act, 2006, where such programs are deemed necessary and/or appropriate by the County and/or municipality, subject to available funding.</p>	<p>To ensure that any Recharge Reducing Activity within the WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system, as prescribed by the Clean Water Act, 2006, the City of Guelph shall encourage storm water rebates for industrial, commercial, institutional and residential customers to promote the ongoing installation and maintenance of Low Impact Development (LID) systems that infiltrate rain water.</p>	N/A	N/A

Maintaining Groundwater Recharge

T20-2: Future: Land Use Planning

Wellington	Guelph	Waterloo	Halton
<p>To ensure that any Recharge Reducing Activity never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Planning Approval Authority shall, within a WHPA-Q, require that all site plan, subdivision and vacant land condominium applications to facilitate Major Development for new residential, commercial, industrial and institutional uses provide a water balance assessment for the proposed development which addresses each of the following requirements:</p> <p>a) maintain pre-development recharge to the greatest extent feasible through best management practices such as LID, minimizing impervious surfaces, and lot level infiltration;</p> <p>b) where pre-development recharge cannot be maintained on site, implement and maximize off-site recharge enhancement (within the same WHPA-Q) to compensate for any predicted loss of recharge from the development; and</p>	<p>To ensure that any Recharge Reducing Activity within the WHPA-Q never becomes a significant drinking water threat to the City of Guelph municipal drinking water system, as prescribed by the Clean Water Act, 2006, the City of Guelph shall require that Planning Act applications for development of industrial, commercial, institutional or residential uses within a WHPA-Q maintain pre-development recharge to</p>	N/A	<p>To ensure that any Recharge Reducing Activity never becomes a significant drinking water threat, where the activity would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, the municipal planning authority shall require:</p> <ol style="list-style-type: none"> 1) New development and site alteration under the Planning Act to implement best management practices such as Low Impact Development (LID) with the goal to maintain predevelopment recharge. Implementation of best management practices is encouraged, but voluntary, for Agricultural Uses, Agriculture-related Uses, or On-farm Diversified Uses where the total impervious surface does not exceed 10 per cent of the lot.

Wellington	Guelph	Waterloo	Halton
<p>c) within a WHPA-Q in a Chloride, Sodium or Nitrate ICA, the water balance assessment must consider water quality when recommending best management practices and address how recharge will be maintained and water quality will be protected including consideration of how water quality will be protected from application and storage of winter maintenance materials including Salt.</p> <p>The Planning Approval Authority shall use its discretion to implement the requirements of this policy to the extent feasible and practicable given the nature of the proposed development, specific circumstances of a site and off-site recharge opportunities.</p>	<p>the greatest extent feasible through best management practices including but not limited to Low Impact Development (LID), minimizing impervious surfaces, or lot level infiltration.</p>		<p>2) All site plan and subdivision applications to facilitate Major Development for new residential, commercial, industrial and institutional uses provide a water balance assessment for the proposed development to the satisfaction of the Planning Approval Authority, that maintains pre-development recharge to the greatest extent feasible through best management practices such as LID, minimizing impervious surfaces, and lot level infiltration.</p>

T20-2a: Future: Land Use Planning

Wellington	Guelph	Waterloo	Halton
<p>To ensure that any Recharge Reducing Activity never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, the County, as the Planning Approval Authority, in consultation with the Municipalities, shall only approve settlement area expansions within a WHPA-Q as part of a municipal comprehensive review or as otherwise provided by the Provincial Growth Plan for the Greater Golden Horseshoe, where it can be adequately demonstrated that recharge functions can be maintained or improved on lands designated Significant Groundwater Recharge Areas within a WHPA-Q.</p>	N/A	N/A	N/A

T20-2b: Future: Land Use Planning

Wellington	Guelph	Waterloo	Halton
<p>To ensure that any Recharge Reducing Activity never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Planning Approval Authorities within the WHPA-Q shall require that all site plan applications under the Planning Act, to facilitate New development not meeting the Major Development definition for new residential, commercial, industrial and institutional uses, implement best management practices such as Low Impact Development (LID) with the goal to maintain predevelopment recharge. This shall include consideration of how recharge will be maintained and water quality will be protected such as from the application and storage of winter maintenance materials including Salt. Planning Approval Authorities shall also encourage implementation of best management practices for site plan applications related to agricultural uses, agriculture-related uses, or on-farm diversified uses provided that such measures are recognized to be voluntary, where the total impervious surface does not exceed 10 per cent of the lot.</p>	N/A	N/A	N/A

T20-3: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat, where this activity is or would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, Municipalities, where appropriate, shall develop and update design standards (e.g., development manuals, design guidelines) for maintaining and enhancing groundwater recharge. These shall include implementation of Low Impact Development (LID), minimizing impervious surfaces and / or lot level infiltration for the purposes of maintaining recharge function. The design standards shall consider water quality when recommending best management practices and address how recharge will be maintained and water quality will be protected from application and storage of winter maintenance materials including Salt. (ref. policy WC-CW-23.6)	To ensure that any Recharge Reducing Activity within the WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system, as prescribed by the Clean Water Act, 2006, the City of Guelph shall develop and implement standard rates for infiltration and recharge with the objective of maintaining pre-development infiltration rates post development and to sustain the City of Guelph's Natural Heritage and Water Resource Systems.	N/A	N/A

T20-4: Existing: Prescribed Instrument

Wellington	Guelph	Waterloo	Halton
To ensure that any Recharge Reducing Activity ceases to be a significant drinking water threat, where this activity is a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks (MECP) shall review and amend, if necessary, Environmental Compliance Approvals for Stormwater Management Facilities and/or Sewage Works to incorporate conditions, where appropriate, to address groundwater recharge considerations. Where appropriate and feasible, the MECP shall encourage the implementation of measures for the maintenance of groundwater recharge functions including LID, minimizing impervious surfaces and lot level infiltration. Where appropriate and feasible, the MECP shall consider establishing approval conditions in the Environmental Compliance Approvals to ensure the proper functioning of groundwater recharge measures including, but not limited to, conditions requiring or related to operations, inspection and maintenance of the Stormwater Management Facilities and/or Sewage Works, groundwater or surface water monitoring related to groundwater recharge, and documentation including manuals and maintenance records. For Stormwater Management Facilities and/or Sewage Works located within a WHPA-Q in a Chloride, Sodium or Nitrate ICA, the MECP shall consider conditions which require best management practices to protect water quality and which address how recharge will be maintained and water quality will be protected from application and storage of winter maintenance materials including Salt.	N/A	N/A	To ensure that any Recharge Reducing Activity ceases to be a significant drinking water threat, where this activity is a significant drinking water threat, as prescribed by the Clean Water Act, 2006, the Ministry of Environment, Conservation and Parks (MECP) shall review and, if necessary, amend Environmental Compliance Approvals for stormwater management facilities with Low Impact Development (LID) systems to ensure that terms and conditions are incorporated that include groundwater recharge considerations.

T20-4a: Future: Prescribed Instrument

Wellington		Guelph	Waterloo	Halton
<p>To ensure that any Recharge Reducing Activity never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks (MECP) should, during any pre-submission consultation for Environmental Compliance Approvals for Stormwater Management Facilities and/or Sewage Works, encourage design and implementation measures for the maintenance of groundwater recharge functions including but not limited to Low Impact Development (LID), minimizing impervious surfaces and lot level infiltration. The MECP shall issue Environmental Compliance Approvals for Stormwater Management Facilities and/or Sewage Works that, where appropriate, incorporate conditions that address groundwater recharge considerations. In addition, the MECP, where appropriate, shall consider incorporating conditions in the Environmental Compliance Approvals to ensure the proper functioning of groundwater recharge measures including, but not limited to, conditions requiring or related to operations, inspection and maintenance of the Stormwater Management Facilities and/or Sewage Works, groundwater or surface water monitoring related to groundwater recharge, and documentation including manuals and maintenance records.</p> <p>For Stormwater Management Facilities and/or Sewage Works located within the WHPA-Q in a Chloride, Sodium or Nitrate ICA, the MECP shall consider conditions that require best management practices to protect water quality and that address how recharge will be maintained including consideration from the application and storage of winter maintenance materials including Salt.</p>	N/A	N/A	To ensure that any Recharge Reducing Activity never becomes a significant drinking water threat, where this activity would be a significant drinking water threat, as prescribed by the Clean Water Act, 2006, the Ministry of Environment, Conservation and Parks (MECP) shall issue Environmental Compliance Approvals for stormwater management facilities with Low Impact Development (LID) systems to ensure that terms and conditions are incorporated that include groundwater recharge considerations.	

T20-8: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
(ref. policy WC-MC-23.2)	To ensure that any Recharge Reducing Activity within the WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system, as prescribed by the Clean Water Act, 2006, the City of Guelph shall include information on how to promote and enhance water quantity by maintaining and improving recharge after occupancy by the resident/business occupant.	N/A	N/A

T20-ECA: Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Recharge Reducing Activity never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the Clean Water	To ensure that any Recharge Reducing Activity never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the Clean Water	To ensure that any Recharge Reducing Activity never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as prescribed by the Clean Water	To ensure that any Recharge Reducing Activity never becomes a significant drinking water threat, where this activity would be a significant drinking water threat as

Wellington	Guelph	Waterloo	Halton
Act, 2006, Municipalities, when reviewing planning applications for New development requiring a new or amended Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works that includes groundwater recharge considerations shall consult with the Ministry of the Environment, Conservation and Parks to discuss any necessary approval conditions of the Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works. Municipalities shall consider the use of holding zone provisions or a community planning permit in order to ensure that an Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works that includes groundwater recharge considerations, if required, is in place prior to the commencement of any development activity.	Act, 2006, the City of Guelph, when reviewing planning applications for New development requiring a new or amended Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works that includes groundwater recharge considerations shall consult with the Ministry of the Environment, Conservation and Parks to discuss any necessary approval conditions of the Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works. Municipalities shall consider the use of holding zone provisions or a community planning permit in order to ensure that an Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works that includes groundwater recharge considerations, if required, is in place prior to the commencement of any development activity.	Act, 2006, the Regional Municipality of Waterloo, when reviewing planning applications for New development requiring a new or amended Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works that includes groundwater recharge considerations shall consult with the Ministry of the Environment, Conservation and Parks to discuss any necessary approval conditions of the Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works. Municipalities shall consider the use of holding zone provisions or a community planning permit in order to ensure that an Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works that includes groundwater recharge considerations, if required, is in place prior to the commencement of any development activity.	prescribed by the Clean Water Act, 2006, Halton Region, when reviewing planning applications for New development requiring a new or amended Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works that includes groundwater recharge considerations shall consult with the Ministry of the Environment, Conservation and Parks to discuss any necessary approval conditions of the Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works. Municipalities shall consider the use of holding zone provisions or a community planning permit in order to ensure that an Environmental Compliance Approvals for Stormwater Management Facilities and / or Sewage Works that includes groundwater recharge considerations, if required, is in place prior to the commencement of any development activity.

Prioritization

T20-10: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks should ensure source protection is included as a risk factor of sites with Stormwater Management Facilities	N/A	N/A	To ensure that any Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat, as prescribed by the Clean Water Act, 2006, the Ministry of Environment, Conservation and Parks (MECP) shall prioritize inspection and

Wellington	Guelph	Waterloo	Halton
and / or Sewage Works in WHPA-Q Areas in the ministry local office risk-based inspection planning process and compliance response planning. (ref. policy WC-NB-23.7)			abatement activities of stormwater management facilities with Low Impact Development (LID) systems.

Appendix C: DRAFT Consensus Policies T19+20 Consumptive Water Takings and Recharge Reduction

Subwatershed Studies

T19-Growth-2/T20-5: Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking or Recharge Reducing Activity never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, within the Guelph-Guelph/Eramosa WHPA-Q and / or IPZ-Q, the County shall review, and if necessary, update their Official Plan to ensure that any lead agency (e.g., Conservation Authority, Province, Municipalities) developing or approving a sub-watershed study terms of reference and monitoring program shall review, and where appropriate, incorporate the Guelph-Guelph/Eramosa Tier 3 Study as part of the sub-watershed study in addition to information from watershed planning.	To ensure that any Consumptive Water Taking or Recharge Reducing Activity within a WHPA-Q ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system as prescribed by the Clean Water Act, 2006, the designated lead agency (e.g., Conservation Authority, Province, Municipalities) completing or updating a subwatershed plan shall, where appropriate, incorporate the Guelph-Guelph/Eramosa Tier 3 Study results in the development and implementation of the subwatershed plan.	To ensure that any Consumptive Water Taking or Recharge Reducing Activity within a WHPA-Q never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, any municipality or conservation authority developing or approving a sub-watershed study terms of reference and monitoring program shall review, and where appropriate, incorporate the Tier 3 Study results as part of the sub-watershed study. (ref. policy RW-CW-64)	To ensure that any Consumptive Water Taking or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, any lead agency (e.g., Conservation Authority, Province, Municipalities) completing or updating a subwatershed study shall review, and where appropriate, incorporate the Tier 3 Study results as part of the subwatershed study.

Coordinating Water Management

T19-Coord-1a/T20-6: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking and/or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Municipalities, the County, and the Grand River Conservation Authority shall mutually share information with the City of Guelph, Region of Waterloo, Halton Region, and Ministry of the	To ensure that any Consumptive Water Taking and/or any Recharge Reducing Activity within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the City of Guelph and the Grand River Conservation Authority shall mutually share information with the municipalities in the County of Wellington, Ministry of the	To ensure that any Consumptive Water Taking and/or any Recharge Reducing Activity within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the	To ensure that any Consumptive Water Taking and/or any Recharge Reducing Activity within a WHPA-Q or IPZ-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Halton Region and the Grand River Conservation Authority shall mutually share information with the municipalities in the County of Wellington,

Wellington	Guelph	Waterloo	Halton
<p>Environment, Conservation and Parks to collaboratively manage local water resources within the Guelph-Guelph/Eramosa WHPA-Q and IPZ-Q. This may include, but is not limited to establishing a drought response program to support the management of drinking water sources during times of drought, sharing of EASR notifications, consideration of climate change, and encouraging monitoring, data sharing and coordination among the agencies, and support the use, maintenance, and update of the Guelph-Guelph/Eramosa Tier 3 Model, and/or any other topics identified.</p> <p>The Grand River Conservation Authority shall develop, in cooperation with the County, Municipalities, City of Guelph, Region of Waterloo, Halton Region, and the Ministry of the Environment, Conservation and Parks, an information-sharing document that includes roles and expectations of the agencies, requirements for meetings, including frequency, agendas and participants, and for the nature, format and types of information to be mutually shared. The information-sharing document shall be established within one (1) year of this policy taking effect. Consideration should also be given to linking in other groups such as Grand River Water Managers and / or Low Water Response Group to this process.</p>	<p>Environment, Conservation and Parks, Region of Waterloo, and Halton Region to collaboratively manage local water resources within the Guelph-Guelph/Eramosa WHPA-Q and IPZ-Q. This may include, but is not limited to establishing a drought response program to support the management of drinking water sources during times of drought, sharing of EASR notifications, consideration of climate change, and encouraging monitoring, data sharing and coordination among the agencies, and support the use, maintenance, and update of the Guelph-Guelph/Eramosa Tier 3 Model.</p> <p>The Grand River Conservation Authority shall develop, in cooperation with the City of Guelph, municipalities in the County of Wellington, Region of Waterloo, Halton Region, and the Ministry of the Environment, Conservation and Parks, an information-sharing document that includes roles and expectations of the agencies, requirements for meetings, including frequency, agendas and participants, and for the nature, format and types of information to be mutually shared. The information-sharing document shall be established within one (1) year of this policy taking effect. Consideration should also be given to linking in other groups such as Grand River Water Managers and / or Low Water Response Group to this process.</p>	<p>Regional Municipality of Waterloo will collaborate with the City of Guelph, County of Wellington, Grand River Conservation Authority, and Ministry of the Environment, Conservation and Parks, to support management of local water resources and protection of municipal drinking water supply sources, including but not limited to establishing a drought response program, sharing of EASR notifications, consideration of climate change impacts and mitigation, encourage monitoring, data sharing and coordination among the agencies, and support the use, maintenance, and update of the Tier 3 model. (ref. policy RW-CW-63)</p>	<p>City of Guelph, Ministry of the Environment, Conservation and Parks, and Region of Waterloo to collaboratively manage local water resources within the Guelph-Guelph/Eramosa WHPA-Q and IPZ-Q. This may include, but is not limited to establishing a drought response program to support the management of drinking water sources during times of drought, sharing of EASR notifications, consideration of climate change, and encouraging monitoring, data sharing and coordination among the agencies, and support the use, maintenance, and update of the Guelph-Guelph/Eramosa Tier 3 Model.</p> <p>The Grand River Conservation Authority shall develop, in cooperation with Halton Region, the City of Guelph, municipalities in the County of Wellington, Region of Waterloo, and the Ministry of the Environment, Conservation and Parks, an information-sharing document that includes roles and expectations of the agencies, requirements for meetings, including frequency, agendas and participants, and for the nature, format and types of information to be mutually shared. The information-sharing document shall be established within one (1) year of this policy taking effect. Consideration should also be given to linking in other groups such as Grand River Water Managers and / or Low Water Response Group to this process.</p>

T19-Coord-1b/T20-6: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking and/or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks, the City of Guelph, Region of Waterloo, and Region of Halton should mutually share information to collaboratively manage water resources within the Guelph-Guelph/Eramosa WHPA-Q and IPZ-Q. The Ministry of the Environment, Conservation and Parks is requested to participate in regular meetings to support information sharing, as identified in policy T19-Coord-1a.	To ensure that any Consumptive Water Taking and/or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks, the municipalities in the County of Wellington, Region of Waterloo, and Region of Halton should mutually share information to collaboratively manage water resources within the Guelph-Guelph/Eramosa WHPA-Q and IPZ-Q. The Ministry of the Environment, Conservation and Parks is requested to participate in regular meetings to support information sharing, as identified in policy T19-Coord-1a.	N/A	To ensure that any Consumptive Water Taking and/or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks, the municipalities in the County of Wellington, Region of Waterloo, and City of Guelph should mutually share information to collaboratively manage water resources within the Guelph-Guelph/Eramosa WHPA-Q and IPZ-Q. The Ministry of the Environment, Conservation and Parks is requested to participate in regular meetings to support information sharing, as identified in policy T19-Coord-1a.

Education and Outreach

T19-E&O-1/T20-7: Existing/Future: Education and Outreach

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Municipalities shall implement and maintain public education and outreach initiatives regarding water conservation and the use of best management practices that reduce the impact on groundwater recharge. Where possible, these education and outreach initiatives will be coordinated with other Municipalities.	To ensure that any Consumptive Water Taking or Recharge Reducing Activity within a WHPA-Q, ceases to be or never becomes a significant drinking water threat to the City of Guelph municipal drinking water system as prescribed by the Clean Water Act, 2006, the City of Guelph shall, in collaboration with the municipalities in the County of Wellington, implement and maintain public education and outreach initiatives regarding water conservation and efficiency, and maintaining and improving recharge during the development approval process and after occupancy by the homeowner. The education program shall encourage the use of best	To ensure that any Consumptive Water Taking or Recharge Reducing Activity within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Regional Municipality of Waterloo shall support any water efficiency education and outreach programs developed by the Township of Centre Wellington and/or City of Guelph to promote water conservation and demand management and use of best management practices that reduce the impact on groundwater recharge for private water users within the Region of Waterloo.	To ensure that any Consumptive Water Taking or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, Halton Region will establish and/or maintain education and outreach efforts to promote water conservation. Where possible, these education and outreach initiatives will be

Wellington	Guelph	Waterloo	Halton
(ref. policy WC-CW-21.4)	management practices that reduce the impact on groundwater.	(ref. policy RW-CW-62)	coordinated with adjacent municipalities.

Long-Term Monitoring

T19-Mon-3/T20-9: Existing/Future: Monitoring

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of Environment, Conservation and Parks (MECP) and the Grand River Conservation Authority (GRCA) in collaboration with the Municipalities and the City of Guelph, develop, maintain and implement a long-term monitoring program of shallow groundwater and surface water systems to assess potential surface water impacts from water takings and recharge reductions, where funding is available. All proposed monitoring programs and results will be regularly reported to the Water Resource Technical Working Group.	To ensure that any Consumptive Water Taking or Recharge Reducing Activity within a WHPA-Q ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the MECP and GRCA, in collaboration with the City of Guelph and the municipalities in the County of Wellington, are encouraged to develop and maintain long-term monitoring program of shallow groundwater and surface water systems to assess potential surface water impacts from water takings and recharge reductions and to assess and manage the impact on surface water, where funding is available. Agencies are requested to report to Water Resource Technical Working Group (WRTWG) on a regular basis on the monitoring results.	N/A	To ensure that any Consumptive Water Taking or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of Environment, Conservation and Parks (MECP) and the Grand River Conservation Authority (GRCA), in consultation with the City of Guelph and other municipalities develop and maintain a long-term monitoring program of shallow groundwater and surface water systems to assess potential surface water impacts from water takings and/or data gaps/recommendations from the Guelph-Guelph/Eramosa Tier 3 Study, where funding is available. All proposed monitoring programs and results will be regularly reported to the Water Resource Technical Working Group and other municipalities.

Sustainable Funding

T19-Fund-1/T20: Existing/Future: Specify Action

Wellington	Guelph	Waterloo	Halton
To ensure that any Consumptive Water Taking or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of the Environment, Conservation and Parks should consider providing ongoing funding to the Grand River Conservation Authority and the Municipalities to maintain and update the following:	see policy T19-Fund-1	N/A	To ensure that any Consumptive Water Taking or Recharge Reducing Activity ceases to be or never becomes a significant drinking water threat as prescribed by the Clean Water Act, 2006, the Ministry of Environment, Conservation and Parks (MECP) provide ongoing funding to the Grand River

Wellington	Guelph	Waterloo	Halton
<p>a) Tier 3 Models;</p> <p>b) Tier 3 climate change assessment models;</p> <p>c) updates to Tier 3 Studies; and</p> <p>d) long-term monitoring programs of groundwater and surface water systems to assess potential impacts from Consumptive Water Takings and / or Recharge Reducing Activities.</p> <p>(ref. policy WC-CW-21.5)</p>			<p>Conservation Authority and the municipalities within the WHPA-Q and IPZ-Q for the following:</p> <p>a) to maintain and update the Tier 3 Models;</p> <p>b) climate change assessment; and</p> <p>c) long-term monitoring program of shallow groundwater and surface waters systems to assess potential surface water impacts from water takings.</p>

Appendix D: DRAFT Definitions

County

Wellington	Guelph	Waterloo	Halton
County - means the Corporation of the County of Wellington	N/A	N/A	N/A

Consumptive Water Taking

Wellington	Guelph	Waterloo	Halton
Consumptive Water Taking - means an activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body, an activity prescribed as a drinking water threat pursuant to Regulation 287/07 under the Clean Water Act, 2006.	Consumptive Water Taking - means an activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body, an activity prescribed as a drinking water threat pursuant to Regulation 287/07 under the Clean Water Act, 2006.	Consumptive Water Taking - means an activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body, an activity prescribed as a drinking water threat pursuant to Regulation 287/07 under the Clean Water Act, 2006.	Consumptive Water Taking - means an activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body, an activity prescribed as a drinking water threat pursuant to Regulation 287/07 under the Clean Water Act, 2006.

Drinking Water Threats Disclosure Report

Wellington	Guelph	Waterloo	Halton
Drinking Water Threat Disclosure Report – means a report required pursuant to the County of Wellington Official Plan which discloses whether or not any of prescribed drinking water threats identified in section 1.1 of Ontario Regulation 287/07 pursuant to the Clean Water Act are expected to occur on a property that is the subject of a development application or as a condition of site plan control for the development, redevelopment or site alteration of non-residential uses within a Wellhead Protection Area, Intake Protection Zone or Issue Contributing Area as may be required pursuant of the official plans of the County and other Municipalities.	As defined in the Wellington chapter of the Source Protection Plan	N/A	N/A

Existing

Wellington	Guelph	Waterloo	Halton
Existing – except where otherwise indicated in this Plan, existing means:	as per existing definition in Source Protection Plan chapter	as per existing definition in Source Protection Plan chapter	as per existing definition in Source Protection Plan chapter

Wellington	Guelph	Waterloo	Halton
<p>a) A use, activity, building or structure at a location in a vulnerable area that is in compliance with all applicable regulations on the effective date of this Source Protection Plan, or at some point prior to the effective date of the Source Protection Plan with a demonstrated intent to continue; or</p> <p>b) An expansion of an existing use or activity, which may include a new building or structure to service the existing use or activity, where the expansion reduces the risk of contaminating drinking water; or</p> <p>c) The expansion, replacement or alteration of an existing building or structure associated with a significant drinking water threat that does not increase the risk of contaminating drinking water; or</p> <p>d) The conversion of an existing use to a similar use, provided it is demonstrated that the conversion will reduce the risk of contaminating drinking water.</p>			

Major Development

Wellington	Guelph	Waterloo	Halton
<p>Major Development – means development consisting of:</p> <p>a) the creation of four or more lots;</p> <p>b) the construction of a building or buildings with a ground floor area of 500 m² or more; or</p> <p>c) the establishment of a Major Recreational Use.</p>	N/A	N/A	<p>Major Development: means development consisting of,</p> <p>a) the creation of four or more lots,</p> <p>b) the construction of a building or buildings with a ground floor area of 500 m² or more, or</p> <p>c) the establishment of a major recreational use</p>

Major Recreational Use

Wellington	Guelph	Waterloo	Halton
<p>Major Recreational Use – means a recreational use that requires large-scale modification of terrain, vegetation or both and usually also requires large-scale buildings or structures, including but not limited to the following: golf courses; serviced playing fields; serviced campgrounds; and ski hills. (Source: Greenbelt Plan)</p>	N/A	N/A	<p>Major Recreational Use – means a recreational use that requires large-scale modification of terrain, vegetation or both and usually also requires large-scale buildings or structures, including but not limited to the following: golf courses; serviced playing fields; serviced campgrounds; and ski hills. (Source: Greenbelt Plan)</p>

Municipalities

Wellington	Guelph	Waterloo	Halton
<p>Municipality(ies) – means one or more of the seven lower tier Municipalities located within the County, consisting of the Township of Guelph-Eramosa, Township of Centre Wellington, Town of Erin, Township of Mapleton, Township of Puslinch, Town of Minto, and the Township of Wellington North</p> <p>Planning Approval Authority(ies) - means an approval authority, or approval authorities, pursuant to the Planning Act, RSO 1990, c. P.13, as amended (the “Planning Act”).</p>	N/A	N/A	N/A

Municipal Supply

Wellington	Guelph	Waterloo	Halton
Municipal Supply – means a municipal drinking water system pursuant to the Safe Drinking Water Act, 2002, s 2	Municipal Supply – means a municipal drinking water system pursuant to the Safe Drinking Water Act, 2002, s 2	Municipal Supply – means a municipal drinking water system pursuant to the Safe Drinking Water Act, 2002, s 2	Municipal Supply – means a municipal drinking water system pursuant to the Safe Drinking Water Act, 2002, s 2

New or Future

Wellington	Guelph	Waterloo	Halton
New or Future – means not existing, as defined herein.	as per existing definition in Source Protection Plan chapter	as per existing definition in Source Protection Plan chapter	as per existing definition in Source Protection Plan chapter

Operating Authority

Wellington	Guelph	Waterloo	Halton
Operating Authority - means, in respect of a drinking water system, the person or entity that is given responsibility by the owner for the operation, management, maintenance or alteration of the system (Safe Drinking Water Act, 2002)	Operating Authority - means, in respect of a drinking water system, the person or entity that is given responsibility by the owner for the operation, management, maintenance or alteration of the system (Safe Drinking Water Act, 2002)	Operating Authority - means, in respect of a drinking water system, the person or entity that is given responsibility by the owner for the operation, management, maintenance or alteration of the system (Safe Drinking Water Act, 2002)	Operating Authority - means, in respect of a drinking water system, the person or entity that is given responsibility by the owner for the operation, management, maintenance or alteration of the system (Safe Drinking Water Act, 2002)

Planning Approval Authority(ies)

Wellington	Guelph	Waterloo	Halton
Planning Approval Authority(ies) - means an approval authority, or approval authorities, pursuant to the Planning Act, RSO 1990, c. P.13, as amended (the "Planning Act").	Planning Approval Authority(ies) - means an approval authority, or approval authorities, pursuant to the Planning Act, RSO 1990, c. P.13, as amended (the "Planning Act").	Planning Approval Authority(ies) - means an approval authority, or approval authorities, pursuant to the Planning Act, RSO 1990, c. P.13, as amended (the "Planning Act").	Planning Approval Authority(ies) - means an approval authority, or approval authorities, pursuant to the Planning Act, RSO 1990, c. P.13, as amended (the "Planning Act").

Recharge Reducing Activity

Wellington	Guelph	Waterloo	Halton
Recharge Reducing Activity – means an activity that reduces the recharge of an aquifer, an activity prescribed as a drinking water threat pursuant to Regulation 287/07 under the Clean Drinking Water Act, 2006.	Recharge Reducing Activity – means an activity that reduces the recharge of an aquifer, an activity prescribed as a drinking water threat pursuant to Regulation 287/07 under the Clean Drinking Water Act, 2006.	Recharge Reducing Activity – means an activity that reduces the recharge of an aquifer, an activity prescribed as a drinking water threat pursuant to Regulation 287/07 under the Clean Drinking Water Act, 2006.	Recharge Reducing Activity – means an activity that reduces the recharge of an aquifer, an activity prescribed as a drinking water threat pursuant to Regulation 287/07 under the Clean Drinking Water Act, 2006.

Sewage Works

Wellington	Guelph	Waterloo	Halton
Sewage Works - means any works for the collection, transmission, treatment and disposal of sewage or any part of such works, pursuant to the Ontario Water Resources Act RSO 1990, s. 1, as amended.	Sewage Works - means any works for the collection, transmission, treatment and disposal of sewage or any part of such works, pursuant to the Ontario Water Resources Act RSO 1990, s. 1, as amended.	Sewage Works - means any works for the collection, transmission, treatment and disposal of sewage or any part of such works, pursuant to the Ontario Water Resources Act RSO 1990, s. 1, as amended.	Sewage Works - means any works for the collection, transmission, treatment and disposal of sewage or any part of such works, pursuant to the Ontario Water Resources Act RSO 1990, s. 1, as amended.

Stormwater Management Facility(ies)

Wellington	Guelph	Waterloo	Halton
Stormwater Management Facility(ies) – means one or more of the following measures constructed to collect, control,	Stormwater Management Facility(ies) – means one or more of the following measures constructed to collect, control,	Stormwater Management Facility(ies) – means one or more of the following measures constructed to collect, control,	Stormwater Management Facility(ies) – means one or more of the following measures constructed to collect, control,

Wellington	Guelph	Waterloo	Halton
<p>infiltrate and / or discharge stormwater run-off and / or groundwater.</p> <ul style="list-style-type: none"> • Stormwater management ponds (i.e. wet ponds) • Dry or retention ponds • Constructed wetlands • Low impact development measures including, but not limited to, infiltration galleries / basins, soak away pits, pervious pipe (subsurface) and/or permeable pavement • Infiltration trenches (open to surface) including but not limited to swales, vegetated strips • Lot level infiltration measures used to infiltrate storm run-off from Salt Application Areas. • Measures used to increase groundwater recharge through enhanced infiltration, e.g. measures used to infiltrate roof run-off and groundwater from foundation drains or sumps. 	<p>infiltrate and / or discharge stormwater run-off and / or groundwater.</p> <ul style="list-style-type: none"> • Stormwater management ponds (i.e. wet ponds) • Dry or retention ponds • Constructed wetlands • Low impact development measures including, but not limited to, infiltration galleries / basins, soak away pits, pervious pipe (subsurface) and/or permeable pavement • Infiltration trenches (open to surface) including but not limited to swales, vegetated strips • Lot level infiltration measures used to infiltrate storm run-off from Salt Application Areas. • Measures used to increase groundwater recharge through enhanced infiltration, e.g. measures used to infiltrate roof run-off and groundwater from foundation drains or sumps. 	<p>infiltrate and / or discharge stormwater run-off and / or groundwater.</p> <ul style="list-style-type: none"> • Stormwater management ponds (i.e. wet ponds) • Dry or retention ponds • Constructed wetlands • Low impact development measures including, but not limited to, infiltration galleries / basins, soak away pits, pervious pipe (subsurface) and/or permeable pavement • Infiltration trenches (open to surface) including but not limited to swales, vegetated strips • Lot level infiltration measures used to infiltrate storm run-off from Salt Application Areas. • Measures used to increase groundwater recharge through enhanced infiltration, e.g. measures used to infiltrate roof run-off and groundwater from foundation drains or sumps. 	<p>infiltrate and / or discharge stormwater run-off and / or groundwater.</p> <ul style="list-style-type: none"> • Stormwater management ponds (i.e. wet ponds) • Dry or retention ponds • Constructed wetlands • Low impact development measures including, but not limited to, infiltration galleries / basins, soak away pits, pervious pipe (subsurface) and/or permeable pavement • Infiltration trenches (open to surface) including but not limited to swales, vegetated strips • Lot level infiltration measures used to infiltrate storm run-off from Salt Application Areas. • Measures used to increase groundwater recharge through enhanced infiltration, e.g. measures used to infiltrate roof run-off and groundwater from foundation drains or sumps.

Tier 3 Study

Wellington	Guelph	Waterloo	Halton
<p>Tier 3 Study – means one or more of the component reports, memorandums and / or data that together form the official record for an accepted Tier 3 Water Budget and Risk Assessment as referenced in the Grand River Assessment Report and completed in accordance with the Director's Technical</p>	<p>Tier 3 Study – means one or more of the component reports, memorandums and / or data that together form the official record for an accepted Tier 3 Water Budget and Risk Assessment as referenced in the Grand River Assessment Report and completed in accordance with the Director's Technical</p>	<p>Tier 3 Study – means one or more of the component reports, memorandums and / or data that together form the official record for an accepted Tier 3 Water Budget and Risk Assessment as referenced in the Grand River Assessment Report and completed in accordance with the Director's Technical</p>	<p>Tier 3 Study – means one or more of the component reports, memorandums and / or data that together form the official record for an accepted Tier 3 Water Budget and Risk Assessment as referenced in the Grand River Assessment Report and completed in accordance with the Director's Technical</p>

Wellington	Guelph	Waterloo	Halton
Rules, as amended. This includes, but is not limited to, reports on physical characterization, model development, risk assessment, uncertainty analyses, risk management measures evaluation processes, threats management strategies, climate change assessment, peer review, municipal peer review and any supporting documents / memorandums.	Rules, as amended. This includes, but is not limited to, reports on physical characterization, model development, risk assessment, uncertainty analyses, risk management measures evaluation processes, threats management strategies, climate change assessment, peer review, municipal peer review and any supporting documents / memorandums.	Rules, as amended. This includes, but is not limited to, reports on physical characterization, model development, risk assessment, uncertainty analyses, risk management measures evaluation processes, threats management strategies, climate change assessment, peer review, municipal peer review and any supporting documents / memorandums.	Rules, as amended. This includes, but is not limited to, reports on physical characterization, model development, risk assessment, uncertainty analyses, risk management measures evaluation processes, threats management strategies, climate change assessment, peer review, municipal peer review and any supporting documents / memorandums.

Tier 3 Model

Wellington	Guelph	Waterloo	Halton
Tier 3 Model – means a computer-based representation of the physical system. Groundwater flow is then calculated within the model using complex mathematical calculations. The calibrated groundwater flow model is used to calculate portions of the water budget and to evaluate the Risk Assessment Scenarios referenced in the Grand River Assessment Report and completed in accordance with the Director's Technical Rules, as amended.	Tier 3 Model – means a computer-based representation of the physical system. Groundwater flow is then calculated within the model using complex mathematical calculations. The calibrated groundwater flow model is used to calculate portions of the water budget and to evaluate the Risk Assessment Scenarios referenced in the Grand River Assessment Report and completed in accordance with the Director's Technical Rules, as amended.	Tier 3 Model – means a computer-based representation of the physical system. Groundwater flow is then calculated within the model using complex mathematical calculations. The calibrated groundwater flow model is used to calculate portions of the water budget and to evaluate the Risk Assessment Scenarios referenced in the Grand River Assessment Report and completed in accordance with the Director's Technical Rules, as amended.	Tier 3 Model – means a computer-based representation of the physical system. Groundwater flow is then calculated within the model using complex mathematical calculations. The calibrated groundwater flow model is used to calculate portions of the water budget and to evaluate the Risk Assessment Scenarios referenced in the Grand River Assessment Report and completed in accordance with the Director's Technical Rules, as amended.

Water Supply Master Plan

Wellington	Guelph	Waterloo	Halton
Water Supply Master Plan – means a long-range plan, for a Municipality, which integrates water supply infrastructure requirements for Existing and Future land use with environmental	Water Supply Master Plan – means a long-range plan, for a Municipality, which integrates water supply infrastructure requirements for Existing and Future land use with environmental	Water Supply Master Plan – means a long-range plan, for a Municipality, which integrates water supply infrastructure requirements for Existing and Future land use with environmental assessment	Water Supply Master Plan – means a long-range plan, for a Municipality, which integrates water supply infrastructure requirements for Existing and Future land use with environmental assessment

Wellington	Guelph	Waterloo	Halton
assessment principles and is prepared in accordance with the Municipal Class Environmental Assessment process (Source: Municipal Engineers Association, October 2000 as amended).	assessment principles and is prepared in accordance with the Municipal Class Environmental Assessment process (Source: Municipal Engineers Association, October 2000 as amended).	principles and is prepared in accordance with the Municipal Class Environmental Assessment process (Source: Municipal Engineers Association, October 2000 as amended).	principles and is prepared in accordance with the Municipal Class Environmental Assessment process (Source: Municipal Engineers Association, October 2000 as amended).

Appendix E - Draft Consensus water quantity policies for Guelph-Guelph/Eramosa IPZ-Q

T19 Consumptive Water Taking

Wellington County	Halton Region	East Garafraxa (policy text same as Halton Region)
T19-Eff-1/2	T19-Eff-1/2	N/A
T19-Reuse-1	T19-Reuse-1	T19-Reuse-1
T19-Growth-1	N/A	N/A
T19-Growth-7	T19-Growth-7	T19-Growth-7
T19-Prior-2	T19-Prior-2	N/A
T19-EASR	T19-EASR	N/A

T20 Recharge Reduction

Wellington County	Halton Region	East Garafraxa
T20-1	N/A	N/A
N/A	T20-2	T20-2
T20-3	N/A	N/A
T20-4/4a	T20-4/4a	T20-4a
T20-10	T20-10	N/A
T20-ECA	T20-ECA	T20-ECA

T19/T20 Consumptive Water Taking / Recharge Reduction

Wellington County	Halton Region	East Garafraxa
T19-Growth-2 / T20-5	T19-Growth-2 / T20-5	N/A
T19-Coord-1 / T20-6	T19-Coord-1 / T20-6	N/A
T19-E&O / T20-7	T19-E&O / T20-7	N/A
T19-Mon-3 / T20-9	T19-Mon-3 / T20-9	N/A
T19-Fund 1, 2, 3 / T20	T19-Fund 1, 2, 3 / T20	N/A

Lake Erie Region Source Protection Committee

Report number: SPC-21-12-05

Date: December 2, 2021

To: Lake Erie Region Source Protection Committee

Subject: Liquid Hydrocarbon Pipeline Threats Policy Update

Recommendation:

THAT the Lake Erie Region Source Protection Committee receives report SPC-21-12-05 – Liquid Hydrocarbon Pipeline Threats Policy Update – for information;

AND THAT the Lake Erie Region Source Protection Committee direct Lake Erie Region staff to share the proposed draft hydrocarbon pipeline policies with municipalities not directly affected by liquid hydrocarbon pipelines, for their support and inclusion in future s.34 or s.36 source protection plan updates.

Report:

The establishment and operation of a liquid hydrocarbon pipeline was originally identified as a local threat in Lake Erie Source Protection Region (Lake Erie Region). Lake Erie Region's source protection plans currently have non-legally binding policies to address pipeline threats.

In 2018, the Ministry of the Environment, Conservation and Parks (MECP) revised the Ontario Regulation 287/07 to include “the establishment and operation of a liquid hydrocarbon pipeline” as a prescribed drinking water threat. Lake Erie Region staff conducted an analysis of where the new prescribed threat poses a significant, moderate or low drinking water threat in response to these changes. There are two existing locations with liquid hydrocarbon pipelines. See report SPC-21-09-02 for details on the risk assessment.

Lake Erie Region staff have been working closely with municipalities directly impacted by liquid hydrocarbon pipelines (County of Brant, City of Brantford and Haldimand County) to develop draft policies. The first set of draft liquid hydrocarbon pipeline policies were presented in report SPC-21-09-02. Since that time, an additional cost-recovery policy has been developed and the Counties of Brant, Haldimand and the City of Brantford have provided their support for the complete suite of draft policies (See Table 1 and 2 of Appendix A).

Next Steps

The proposed next steps are:

- Share the proposed suite of draft liquid hydrocarbon pipeline policies with municipalities in Catfish Creek and Kettle Creek Source Protection Areas (SPAs) and request their support for inclusion of the policies in the s.36 Catfish Creek and Kettle Creek Source Protection Plan updates.

- Share the proposed suite of draft liquid hydrocarbon pipeline policies with the remaining municipalities in the Grand River and Long Point Region SPAs not directly impacted by liquid hydrocarbon pipelines, and request their support for their inclusion in future s.34 or s.36 source protection plan updates, as appropriate.

Prepared by:

Ilona Feldmann
Lake Erie Source Protection Program Assistant

Approved by:

Martin Keller
Lake Erie Source Protection Program Manager

Appendix A: Proposed draft liquid hydrocarbon pipeline policies

Table 1: Significant drinking water threat policies for liquid hydrocarbon pipelines in Lake Erie Region

Policy Approach	Policy Applicability	Current Approved Policies	Proposed Draft Policies
Ensure Drinking Water Source Protection is considered in decisions by regulators	Existing and/or Future Specify Action WHPA-A v.10 WHPA-B v.10 WHPA-E v.9 IPZ-1 v.9&10 IPZ-2 v.9	N/A	To reduce the risks to drinking water from the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act, where the activity is or would be a significant drinking water threat, the Canada Energy Regulator, Ontario Energy Board, and Technical Standards and Safety Authority (TSSA) <u>should ensure</u> that drinking water source protection is considered as a risk factor in their regulatory decision making framework.
Ensure pipeline owners use best available source protection information	Existing and/or Future Specify Action WHPA-A v.10 WHPA-B v.10 WHPA-E v.9 IPZ-1 v.9&10 IPZ-2 v.9	N/A	To reduce the risks to drinking water from the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act, where the activity is or would be a significant drinking water threat, pipeline owners <u>should ensure</u> that best available source protection information is used such as up to date vulnerable areas in assessment reports when developing, operating and maintaining liquid hydrocarbon pipelines,

Policy Approach	Policy Applicability	Current Approved Policies	Proposed Draft Policies
			including developing and updating emergency planning zones (EPZs).
Ensure Source Protection Authority is notified of new proposed pipelines	Existing and/or Future Specify Action WHPA-A v.10 WHPA-B v.10 WHPA-E v.9 IPZ-1 v.9&10 IPZ-2 v.9	To reduce the risks to drinking water from the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act, where the activity is or would be a significant drinking water threat, the Canada Energy Regulator Ontario Energy Board, and the pipeline proponent are encouraged to provide the Source Protection Authority and the County the location of any new proposed pipeline within the County and/or Source Protection Area. The Source Protection Authority should document in the annual report the number of new pipelines proposed within vulnerable areas if a pipeline has been proposed and/or application has been received.	To reduce the risks to drinking water from the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act, where the activity is or would be a significant drinking water threat, the Canada Energy Regulator Ontario Energy Board, and the pipeline proponent <u>should ensure</u> that the Source Protection Authority and the County are provided the location of any new proposed pipeline. The Source Protection Authority should document in the annual report the number of new pipelines proposed within vulnerable areas if a pipeline has been proposed and/or application has been received.
Manage liquid hydrocarbon pipelines through S.58 Risk	Existing Specify Action	To reduce the risk to drinking water from the establishment and operation of a liquid hydrocarbon pipeline where the activity would be a significant drinking	Remove

Policy Approach	Policy Applicability	Current Approved Policies	Proposed Draft Policies
Management Plans (RMP)	WHPA-A v.10 WHPA-B v.10	<p>water threat, this activity shall be designated for the purpose of Section 58 of the Clean Water Act, 2006 and a Risk Management Plan shall be required. The Risk Management Plan may include, but not be limited to, the following:</p> <ul style="list-style-type: none"> a. Evaluation of existing Spills Prevention Plans/ Spill Contingency Plans; b. An evaluation of communication plans and training protocols with respect to management of a spill; c. Additional measures to reduce the likelihood that a spill or leak would be a risk to drinking water sources; and d. Ensure all applicable provisions of Ontario Regulations O. Reg. 210/01 e. Ensure the protection of drinking water sources by including the following; <ul style="list-style-type: none"> i. Best Management Practices for spill management; ii. proof of ability to pay for clean-up of potential contamination; and iii. the appropriate frequency of inspections. 	
Ensure pipeline owners, upon request, reimburse costs	Existing and/or Future Specify Action	N/A	<p>*New*</p> <p>To ensure the establishment and operation of a liquid hydrocarbon pipeline within the</p>

Policy Approach	Policy Applicability	Current Approved Policies	Proposed Draft Policies
borne by a municipality for work related to source protection	WHPA-A v.10 WHPA-B v.10 WHPA-E v.9 IPZ-1 v.9&10 IPZ-2 v.9		meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act ceases to be or never becomes a significant drinking water threat, where the activity is or would be a significant drinking water threat, pipeline owners should, upon request by the municipality, reimburse costs borne by the municipality where work in relation to this activity is required by a regulator with regards to protecting drinking water sources, or where the work identified by the drinking water system owner is supported based on due diligence and best practices as it relates to source protection and the protection of public health.

Table 2: Moderate and Low Drinking Water Threat Policies for Liquid Hydrocarbon Pipelines in Lake Erie Region

Policy Approach	Policy Applicability	Current Approved Policies	Proposed Draft Policies
Ensure Drinking Water Source Protection is considered in decisions by regulators	Existing and/or Future Specify Action WHPA-B v.6&8 WHPA-C v.6&8 WHPA-D v.6 WHPA-E v.4.5-<9 IPZ-3 v.4.5-<9	N/A	To reduce the risks to drinking water from the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act, where the activity is or would be a moderate or low drinking water threat, the Canada Energy Regulator, Ontario Energy Board, and Technical Standards and Safety Authority (TSSA) <u>should ensure</u> that drinking water source protection is considered as a risk factor in their regulatory decision making framework.
Ensure pipeline owners use best available source protection information	Existing and/or Future Specify Action WHPA-B v.6&8 WHPA-C v.6&8 WHPA-D v.6 WHPA-E v.4.5-<9 IPZ-3 v.4.5-<9	N/A	To reduce the risks to drinking water from the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act, where the activity is or would be a moderate or low drinking water threat, pipeline owners <u>should ensure</u> that best available source protection information is used such as up to date vulnerable areas in assessment reports when developing, operating and maintaining liquid hydrocarbon pipelines,

Policy Approach	Policy Applicability	Current Approved Policies	Proposed Draft Policies
			<p>including developing and updating emergency planning zones (EPZs).</p>
Ensure Source Protection Authority is notified of new proposed pipelines	<p>Existing and/or Future Specify Action</p> <p>WHPA-B v.6&8 WHPA-C v.6&8 WHPA-D v.6 WHPA-E v.4.5-<9 IPZ-3 v.4.5-<9</p>	N/A	<p>To reduce the risks to drinking water from the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act, where the activity is or would be a moderate or low drinking water threat, the Canada Energy Regulator Ontario Energy Board, and the pipeline proponent <u>should ensure</u> that the Source Protection Authority and the County are provided the location of any new proposed pipeline.</p> <p>The Source Protection Authority should document in the annual report the number of new pipelines proposed within vulnerable areas if a pipeline has been proposed and/or application has been received.</p>
Ensure pipeline owners, upon request, reimburse costs borne by a municipality for work	<p>Existing and/or Future Specify Action</p> <p>WHPA-B v.6&8 WHPA-C v.6&8 WHPA-D v.6</p>	N/A	<p>*New*</p> <p>To ensure the establishment and operation of a liquid hydrocarbon pipeline within the meaning of O. Reg. 210/01 under the Technical Safety and Standards Act or that is subject to the Canadian Energy Regulator Act ceases to be or never</p>

Policy Approach	Policy Applicability	Current Approved Policies	Proposed Draft Policies
related to source protection	WHPA-E v.4.5-<9 IPZ-3 v.4.5-<9		becomes a moderate or low drinking water threat, where the activity is or would be a moderate or low drinking water threat, pipeline owners should, upon request by the municipality, reimburse costs borne by the municipality where work in relation to this activity is required by a regulator with regards to protecting drinking water sources, or where the work identified by the drinking water system owner is supported based on due diligence and best practices as it relates to source protection and the protection of public health.